

## APPENDIX A

### 2001 LRMP DIRECTION (OBJECTIVES, STANDARDS, AND GUIDELINES)

Objectives are concise, time-specific statements of measurable planned steps taken to accomplish a goal. They are generally achieved by implementing a project or activity. However, objectives are not targets. Targets are dependent upon budgets, which may or may not reflect management plan emphasis areas.

Standards are actions that must be followed or are required limits to activities in order to achieve grassland/forest objectives. Site-specific deviations from standards must be analyzed and documented in management plan amendments.

Guidelines are actions that should be followed to achieve grassland or forest goals and objectives. Deviations from guidelines must be analyzed during project-level analysis and documented in a project decision document, but do not require management plan amendments.

Table A- 1. 2001 LRMP direction related to livestock management on the Oglala and Fall River West geographic areas (GAs).

Source	2001 LRMP Direction	Meeting, Not Meeting, Moving Toward, NA
Grassland wide Goal 1a Objective 1	Improve 20 percent of 6 <sup>th</sup> -level watersheds from Class II to Class I, or from Class III to Class II. Maintenance of unimpaired watersheds and restoration of impaired watershed are high priorities.	Meeting
Grassland wide Goal 1a Objective 1	Achieve a 20 percent reduction in acres of eroded or disturbed soils by Forest Service permitted or management actions.	Meeting
Grassland wide Goal 1a Objective 2	Implement management practices that will move at least 80 percent of riparian areas and woody draws toward self-perpetuating tree and shrub regeneration within site capability.	Meeting Long-term monitoring will continue to evaluate grazing management effects.
Grassland wide Goal 1c Objective 2	Over the next 15 years, retain only those range structures (fences and water developments) that achieve resource management (i.e., wildlife habitat, botanical, range management, visual quality, and recreation) goals and objectives.	Moving toward New or reconstructed livestock fences will meet forest plan direction for wildlife passage.

Source	2001 LRMP Direction	Meeting, Not Meeting, Moving Toward, NA
Grassland wide Goal 2c Objective 1	Annually, provide forage for livestock on suitable rangelands. Annual grazing levels will be adjusted, as needed, during periods of drought or for other conditions.	Meeting
Water standard 3	In the water influence zone next to perennial and intermittent streams, lakes, and wetlands, allow only those actions that maintain or improve long-term health and riparian ecosystem condition.	Meeting on the majority of riparian areas and woody draws that exist in the project area and moving toward on the remainder. Long-term monitoring will continue to evaluate grazing management effects.
Water standard 5	Conduct actions so that stream pattern, geometry, and habitats are maintained or improved toward robust stream health.	Meeting on the majority of riparian areas and woody draws that exist in the project area and moving toward on the remainder. Long-term monitoring will continue to evaluate grazing management effects.
Paleontological resources standard 1	Protect key paleontological resources (Classes 3, 4, and 5 of the Fossil Potential Classification) from disturbance, or mitigate the effects of disturbance, to conserve scientific, interpretive, and legacy values.	Moving toward. Once fence exclosures are constructed, we will meet direction.
Fish, wildlife, rare plants standard 2	Modify livestock grazing practices as needed to reduce adverse impacts of drought on food and cover for prairie grouse and other wildlife.	Moving toward Monitoring for sharp-tailed grouse will need to continue on the ONG since it is a MIS species.
Fish, wildlife, rare plants standard 3	When installing new livestock water tanks, install durable and effective escape ramps for birds and small mammals. During maintenance of existing tanks, replace ramps that are ineffective or missing.	Moving toward
Fish, wildlife, rare plants guideline 7	Manage vegetation so native forbs periodically complete their full reproductive cycle	Meeting

Source	2001 LRMP Direction	Meeting, Not Meeting, Moving Toward, NA
Fish, wildlife, rare plants guideline 8	Use the following criteria at the project level to help determine where to manage for tall and dense nesting habitat in as large of blocks as possible in upland areas for waterfowl, prairie grouse and other ground-nesting birds: Presence of moderate to highly productive soils. Dominance of mid to tall grass species. Proximity to waterfowl pairing ponds and/or prairie grouse display grounds. Proximity to wetlands with well-developed emergent vegetation. Proximity to cooperative waterfowl/wetland development projects and other major wetland complexes.	Moving toward Monitoring will need to be implemented or continued to determine site capability.
Fish, wildlife, rare plants guideline 10	During the AMP process or as other opportunities arise, design and implement livestock grazing strategies to provide well-developed emergent vegetation through the growing season on 30 to 50% of the wetlands (natural and constructed) distributed across watersheds and landscapes, contingent on local site potential.	Moving toward Many wetlands occur within exclosures. Usually allow grazing before June 1 or after September 15 to avoid the growing season for most wetland plants.
Fish, wildlife, rare plants guideline 11	During the AMP process or as other opportunities arise, design and implement livestock grazing strategies to provide for thick and brushy understories and multi-layer and multi-age structure in riparian habitats, wooded draws and woody thickets, contingent on local site potential.	Meeting on the majority of riparian areas and woody draws that exist in the project area and moving toward on the remainder.
Fish, wildlife, rare plants guideline 15	To help reduce disturbances to breeding and nesting sharp-tailed grouse, do not authorize the following activities within 1.0 mile of active display grounds from March 1 to June 15: construction (e.g., roads, water impoundments, pipelines, utilities, oil and gas facilities, fencing).	Meeting This will be considered for range management improvement construction.

Source	2001 LRMP Direction	Meeting, Not Meeting, Moving Toward, NA
Fish, wildlife, rare plants guideline 17	During the AMP process or as other opportunities arise, design and implement livestock grazing strategies that provide quality nesting and brooding habitat on at least 25% of the grasslands (consistent with vegetation objectives for the geographic area) within 1.0 mile of active sharp-tailed grouse display grounds. Consult [forest plan] Appendix H for a description of quality habitat for sharp-tailed grouse.	Moving toward on the Oglala GA. More monitoring needed to evaluate.
Fish, wildlife, rare plants guideline 19	To help provide suitable habitat for black-footed ferrets and their young during the breeding and whelping seasons, prohibit the following activities within 1/8 mile of prairie dog colonies, or those portions of larger colonies, occupied or thought to be occupied by ferrets from March 1 through August 31: construction (e.g., roads, water impoundments, oil and gas facilities).	NA
Fish, wildlife, rare plants guideline 20	To help provide suitable habitat for black-footed ferrets and their young during the breeding and whelping seasons, do not authorize the following activities within 1/8 mile of prairie dog colonies, or those portions of larger colonies, occupied or thought to be occupied by ferrets from March 1 through August 31: construction (e.g., pipelines, utilities, fencing).	NA
Fish, wildlife, rare plants guideline 23	Do not authorize new facilities, roads, trails, fences, salting and mineral areas, or water developments in habitat occupied by sensitive plant species.	NA for the Oglala GA Meeting for the Fall River West GA
Fish, wildlife, rare plants standard 24	During the AMP process or as other opportunities arise, design and implement livestock grazing strategies that allow sensitive plant species to complete their reproductive cycles at a frequency that maintains and enhances their populations.	NA for the Oglala GA Meeting for the Fall River West GA
Fish, wildlife, rare plants standard 27	As opportunities arise, design timing, intensity and frequency of mowing, burning and livestock grazing to maintain and/or increase populations of sensitive plant species and the health of rare plant communities.	Meeting for sensitive plants Moving toward for rare plant communities

Source	2001 LRMP Direction	Meeting, Not Meeting, Moving Toward, NA
Fish, wildlife, rare plants guideline 30	Design vegetation and pest management activities (e.g., prescribed burning, mowing, livestock grazing, or grasshopper spraying) and pesticide application projects in known habitats of sensitive butterfly species to reduce mortality of butterflies and to maintain or enhance nectar and larvae host plant species.	Moving toward Monitoring would need to be established.
Fish, wildlife, rare plants guideline 38	During the AMP process or as other opportunities arise, design and implement livestock grazing strategies that provide quality nesting and brooding habitat on at least 30% of the area within 1.0 mile of active display grounds (consistent with vegetation objectives for the geographic area).	Moving toward More monitoring needed to evaluate.
Fish, wildlife, rare plants guideline 45	To reduce disturbances to swift fox during the breeding and whelping seasons, prohibit the following activities within 0.25 miles of their dens from March 1 to August 31: construction (e.g., roads, water impoundments, oil and gas facilities).	Meeting Forest plan direction for swift fox will be followed prior to construction of range improvements. Monitoring will need to be conducted.
Fish, wildlife, rare plants guideline 46	To reduce disturbances to swift fox during the breeding and whelping seasons, do not authorize the following activities within 0.25 miles of their dens from March 1 to August 31: construction (e.g., pipelines, utilities, fencing).	Meeting Forest plan direction for swift fox will be followed prior to construction of range improvements. Monitoring will need to be conducted.
Fish, wildlife, rare plants guideline 48	During the AMP process or as other opportunities arise, design and implement livestock grazing strategies that provide a mosaic of low, moderate and high grassland structure in occupied swift fox habitat, consistent with vegetation objectives for the geographic area.	Moving toward Swift fox monitoring is needed on the Oglala GA Meeting on the Fall River West GA
Livestock grazing guideline 3	Adjust livestock management activities annually as needed to take into account the effect of natural processes, such as droughts, fires, floods, and grasshoppers on forage availability.	Meeting

Source	2001 LRMP Direction	Meeting, Not Meeting, Moving Toward, NA
Livestock grazing guideline 4	<p>Manage livestock grazing to maintain or improve riparian/woody draw areas. Implement the following practices:</p> <p>Avoid season-long grazing and activities, such as feeding, salting, herding, or water developments, which concentrate livestock in riparian/woody draw areas.</p> <p>Control the timing, duration, and intensity of grazing in riparian areas to promote establishment and development of woody species.</p>	Meeting on the majority of riparian areas and woody draws that exist in the project area and moving toward on the remainder.
Livestock grazing guideline 5	<p>Meet rest objectives based on, but not limited to, the following desired conditions:</p> <p>Where high structure is required for plant and animal communities (See Geographic Area) and/or reproductive success of Management Indicator Species and threatened, endangered, and sensitive species.</p> <p>Where increased fuel loads are desired for prescribed burning.</p> <p>Where rest is required for vegetative recovery after wildfire or prescribed burns.</p> <p>Where ungrazed areas are desired for monitoring vegetation structure or for research needs.</p> <p>Where ungrazed areas are desired for biological diversity.</p>	<p>Meeting</p> <p>Rest is identified as an adaptive option for several allotments and can be implemented if needed to achieve objectives.</p>
Livestock grazing guideline 6	When allotment management plans are revised, adjust stocking levels to account for the variations in live weight of livestock if needed to meet desired vegetative conditions.	<p>Meeting</p> <p>Stocking levels adjusted based upon results of monitoring rangeland vegetation condition.</p>
Livestock grazing guideline 9	Prioritize and remove any fences or water developments that are not contributing to achieving desired conditions.	<p>Meeting</p> <p>Following monitoring and evaluation, unneeded range improvements would be prioritized for removal.</p>

Source	2001 LRMP Direction	Meeting, Not Meeting, Moving Toward, NA
Non native and invasive species guideline 6	Utilize all methods feasible, including livestock grazing strategies, in the integrated pest management program.	Meeting Livestock management will continue to be considered in the integrated pest management program.
Heritage resources guideline 2	Consider American Indian traditional cultural plant use, when designing vegetative management activities.	Meeting If American Indian traditional plant use is identified in the geographic area, vegetation management will be designed in consideration of such use.
Heritage resources standard. 5	Protect heritage resources from damage by activities or vandalism through project design, specified protection measures, monitoring, and coordination.	Meeting Livestock management activities would be designed so that heritage resources would not be damaged.
Infrastructure use and management guideline 6	Build new and reconstructed fences to provide for big game movement (Appendix B)* and access for recreation, fire protection, and mineral development. * Fence specifications from LRMP appendix B are listed at the end of this table.	Fences construction would follow this forest plan direction.
(Infrastructure use and management guideline 7)	As opportunities allow, install gates along all existing fences at intervals to provide reasonable access.	Fences construction would follow this forest plan direction.
Infrastructure use and management guideline 8	Install all gates so they are easily opened and closed by all users.	Fences construction would follow this forest plan direction.
Oglala GA Vegetation objective 1	Manage the geographic area to meet the following vegetation composition objectives: Late seral = 10% to 30% Late intermediate seral = 50% to 70% Early intermediate seral = 10% to 20% Early seral = 1% to 10%	Meeting and moving toward Livestock management would allow us to move toward the desired composition. Currently at Late Seral=28%, Late Intermediate=47%, Early Intermediate=24% and Early=1%

Source	2001 LRMP Direction	Meeting, Not Meeting, Moving Toward, NA
Oglala GA Vegetation objective 2	Manage the geographic area to meet the following vegetation structure objectives: High = 10% to 30% Moderate = 50% to 70% Low = 10% to 30%	Moving toward VOR monitoring will need to be conducted
Oglala GA Plains sharp-tailed grouse objectives	Plains sharp-tailed grouse Establish and maintain quality nesting and brooding habitat for sharp-tailed grouse (see [forest plan] Appendix H) and associated wildlife by meeting vegetation objectives for high structure within 10 years. Objective Establish and maintain quality foraging habitat for sharp-tailed grouse and associated wildlife species by enhancing and/or maintaining a diversity of forb species in grassland communities and regeneration of shrub patches and the shrub component of wooded draws and riparian habitats. Objective	Moving toward
Oglala GA standards and guidelines Vegetation 1.	Use current monitoring information and stocking rate guidelines for livestock grazing (see Appendix I) to help design and implement range management strategies for meeting desired vegetation objectives. Standard	Moving toward Under adaptive management and with monitoring results, range management practices would be implemented to meet desired vegetation objectives.
Oglala GA standards and guidelines Riparian 1.	Manage riparian areas to maximize riparian vegetation such as sedges, rushes, willows, cottonwoods and green ash. Guideline	Meeting on the majority of riparian areas and woody draws that exist in the project area and moving toward on the remainder.
Oglala GA standards and guidelines Infrastructure 1.	New structural range improvements (fences and water developments) may be constructed as needed to achieve desired condition objectives (wildlife habitat, botanical, range management, visual quality and recreation). Guideline	Moving toward

Source	2001 LRMP Direction	Meeting, Not Meeting, Moving Toward, NA
Oglala GA standards and guidelines Wildlife, fish, and rare plants 1. MIS	Black-tailed prairie dog Manage livestock grazing to encourage prairie dog colony expansion in interior areas and to slow expansion along property boundaries. The appropriate livestock grazing strategies for individual areas will be identified as site-specific management plans are revised. Guideline	Moving toward
Oglala GA standards and guidelines Wildlife, fish, and rare plants 1. MIS	Plains sharp-tailed grouse A range of 10 to 30% of the acres is prescribed for high structure grasslands in this geographic area. A substantial amount of this acreage should be located where it would optimize habitat for sharp-tailed grouse and associated species. The following criteria will be considered during site-specific project level planning to help determine the best locations to manage for high structure grasslands: Presence of moderate to highly productive soils and range sites, Proximity to sharp-tailed grouse display grounds, Proximity to shrub habitats, private croplands and other sharp-tailed grouse foraging habitats. Guideline	Moving toward
Oglala GA standards and guidelines Wildlife, fish, and rare plants 2. TES	Mountain plover To help reduce disturbances and risks to nesting mountain plover, prohibit the following activities in plover nesting areas or within 0.25 miles of plover nests from March 15 through July 31: Construction (e.g., roads water impoundments). To help reduce disturbances and risks to nesting mountain plover, do not authorize the following activities in plover nesting areas or within 0.25 miles of plover nests from March 15 through July 31: Construction (e.g., pipelines, utilities, fencing).	Moving toward Mountain plover monitoring is needed to determine existence. To date no mountain plover have been observed in the project area.

Source	2001 LRMP Direction	Meeting, Not Meeting, Moving Toward, NA
2. TES, cont.	<p>Mountain plover, cont.</p> <p>Use the following criteria at the project level to help determine where to use prescribed burning and high livestock grazing intensities ([forest plan] Appendix I) to provide low grassland structure and enhanced mountain plover nesting and brooding habitat:</p> <ul style="list-style-type: none"> <li>Proximity to existing mountain plover nesting areas.</li> <li>Proximity to prairie dog colonies.</li> <li>Presence of expansive and flat grassland areas. Guideline</li> </ul>	<p>Moving toward</p> <p>Mountain plover monitoring is needed to determine existence. To date no mountain plover have been observed in the project area.</p>
<p>Oglala GA standards and guidelines</p> <p>Wildlife, fish, and rare plants</p> <p>2. TES</p>	<p>Swift fox</p> <p>The northeast portion of this geographic area is near an area on the Buffalo Gap National Grassland that supports swift fox, and there's a high probability that swift fox also uses this part of the Oglala National Grassland. USDA predator (primarily coyote) control activities to reduce livestock losses will be limited in this area to methods that do not pose a significant and direct mortality risk to swift fox. This standard would also apply to any other areas in this geographic area where swift fox are found in the future. Standard</p>	<p>Meeting</p>
<p>Fall River West Geographic area</p> <p>Vegetation objective 1</p>	<p>Manage the geographic area to meet the following vegetation composition objectives:</p> <ul style="list-style-type: none"> <li>Late seral = 10% to 30%</li> <li>Late intermediate seral = 50% to 70%</li> <li>Early intermediate seral = 10% to 20%</li> <li>Early seral = 1% to 10%</li> </ul>	<p>Meeting</p> <p>Currently at Late=17%, Late Intermediate=61%, Early Intermediate=15%, and Early=7%</p>
<p>Fall River West Geographic area</p> <p>Vegetation objective 2</p>	<p>Manage the geographic area to meet the following vegetation structure objectives:</p> <ul style="list-style-type: none"> <li>High = 10% to 30%</li> <li>Moderate = 50% to 70%</li> <li>Low = 10% to 30%</li> </ul>	<p>Meeting.</p> <p>Currently at High=12%, Moderate=62% and Low 26%</p>

Source	2001 LRMP Direction	Meeting, Not Meeting, Moving Toward, NA
Oglala and Fall River West GAs	Prescribe burn a minimum of 1,500 acres per decade to meet objectives.	Moving toward
Oglala and Fall River West GAs Rest objective 1	Rest 1-10 percent of the suitable rangeland each year.	Meeting Approximately 5,600 capable acres in the geographic area are generally excluded from grazing. This equates to approximately 5% of the geographic area being rested from grazing annually. If site-specific monitoring indicates that a change in grazing management is needed, rest would be considered as an adaptive management option. The result could be an increase in the amount of area rested.
Fall River West GA objectives Wildlife, Fish and Rare Plants 1. MIS	Sage Grouse Provide habitat conditions that, in combination with sagebrush habitat on adjoining lands, helps support stable to increasing sage grouse populations (long-term trends) in the western part of this geographic area. Objective Establish and maintain quality nesting and brooding habitat for sage grouse (Appendix H) and associated wildlife across most of the sagebrush habitat in this geographic area within 10 to 15 years. Objective	Moving toward Monitoring indicates little if any sage grouse in the Fall River West GA due to sparse sagebrush cover.
Fall River West GA objectives 2. Special Plant and Wildlife (3.64) Area: Special Wetland/Aquatic Habitat (Crowe Dam)	The area will be managed to maintain and enhance habitat for waterfowl and shorebirds as follows: Provide diverse and quality wetland/aquatic habitat at levels that help support stable to increasing populations of waterfowl and other wildlife with similar habitat needs. Objective	Meeting
Fall River West GA standards and guidelines Vegetation standard 1	Use existing monitoring information and stocking rate guidelines for livestock grazing (see [forest plan] Appendix I) to help design and implement range management strategies to meet desired vegetation objectives. Standard	Meeting

Source	2001 LRMP Direction	Meeting, Not Meeting, Moving Toward, NA
Fall River West GA standards and guidelines Infrastructure guideline 1	New structural improvements (fences and water developments) may be constructed as needed to achieve desired condition objectives. Guideline	Meeting
Fall River West GA standards and guidelines Wildlife, fish and rare plant standards and guidelines 1. MIS	<p>Sage grouse</p> <p>To reduce disturbances to nesting sage grouse, prohibit the following activities within 2.0 miles of active display grounds from March 1 to June 15:</p> <p>Construction (e.g., roads, water impoundments, oil and gas facilities).</p> <p>To reduce disturbances to nesting sage grouse, do not authorize the following activities within 2.0 miles of active display grounds from March 1 to June 15:</p> <p>Construction (e.g., pipelines, utilities, fencing)</p> <p>Pastures will be managed for sage grouse/big sagebrush only if they contain 5% or more canopy cover of big sagebrush.</p> <p>Guideline</p> <p>During the AMP process or as other opportunities arise, design and implement livestock grazing strategies to provide quality nesting cover in all sagebrush stands (&gt;15% canopy cover of sagebrush) within at least 3.0 miles of active display grounds (consistent with GA vegetation objectives) where sagebrush is irregularly distributed around the display ground. This minimum distance can be reduced to 2.0 miles where sagebrush is uniformly distributed around display grounds. Consult Appendix H for a description of quality nesting habitat for sage grouse.</p> <p>Standard</p>	<p>Moving toward</p> <p>No sage grouse leks occur within the Fall River West GA.</p> <p>Monitoring needed to determine existence of potential habitat.</p>

Source	2001 LRMP Direction	Meeting, Not Meeting, Moving Toward, NA
1. MIS, cont.	<p>Maintain or enhance wet and sub-irrigated meadows, seeps, riparian habitats, and other wetland areas that occur in or adjacent to sage grouse habitat as quality sage grouse foraging areas during the spring, summer, and fall. Consult Appendix H for a description of quality foraging habitat for sage grouse broods. Standard</p> <p>At the onset of drought, evaluate the need to adjust land uses to reduce impacts on sage grouse nesting and brooding habitat. Standard</p> <p>Manage for high vegetative structure in areas where it would enhance sage grouse nesting habitat. Emphasize areas characterized by:</p> <ul style="list-style-type: none"> <li>Presence of moderate to highly productive soils and range sites,</li> <li>Plant composition dominated by mid and/or tall grasses, with sagebrush canopy cover of 15-25%,</li> <li>Proximity to sage grouse display grounds. Guideline</li> </ul>	<p>Moving toward</p> <p>No sage grouse leks occur within the Fall River West GA.</p> <p>Monitoring needed to determine existence of potential habitat.</p>
<p>Fall River West GA Wildlife, fish and rare plant standards and guidelines</p> <p>2. TES</p>	<p>Mountain plover</p> <p>The following mountain plover direction will apply if plover are eventually found or established in this geographic area:</p> <p>To help reduce disturbances and risks to nesting mountain plover, prohibit the following activities in plover nesting areas or within 0.25 miles of plover nests from March 15 through July 31:</p> <ul style="list-style-type: none"> <li>Construction (e.g., roads, water impoundments, oil and gas facilities)</li> </ul> <p>To help reduce disturbances and risks to nesting mountain plover, do not authorize the following activities in plover nesting areas or within 0.25 miles of plover nests from March 15 through July 31:</p> <ul style="list-style-type: none"> <li>Construction (e.g., pipelines, utilities, fencing),</li> </ul>	NA

Source	2001 LRMP Direction	Meeting, Not Meeting, Moving Toward, NA
2. TES, cont.	<p>Use the following criteria at the project level to help determine where to use prescribed burning and high livestock grazing intensities (Appendix I) to provide low grassland structure and enhanced mountain plover nesting and brooding habitat:</p> <p>Proximity to existing mountain plover nesting areas.</p> <p>Proximity to prairie dog colonies.</p> <p>Presence of expansive and flat grassland areas. Guideline</p>	NA
<p>Fall River West GA Wildlife, fish and rare plant standards and guidelines</p> <p>2. TES</p>	<p>Swift fox</p> <p>This geographic area supports swift fox. USDA predator (primarily coyote) control activities to reduce livestock losses will be limited in this area to methods that do not pose a significant and direct mortality risk to swift fox. Standard</p> <p>Special Plant and Wildlife (3.64) Areas: Swift Fox. This area will be managed to emphasize moderate to low structure for swift fox habitat. Guideline</p>	Meeting
<p>Fall River West GA Wildlife, fish and rare plant standards and guidelines</p> <p>3. Special Plant and Wildlife (3.64) Area: Special Wetland/Aquatic Habitat (Crowe Dam).</p>	<p>Vegetation in this area will be managed to enhance and maintain the habitat for waterfowl and shorebirds as follows:</p> <p>Establish and maintain quality nesting and brooding habitat on adjacent upland grasslands for waterfowl and associated wildlife within 10 years. A substantial amount of this acreage should be located where it would optimize habitat for waterfowl and associated species. The following criteria will be considered during site-specific, project level planning to help determine the best locations to manage for high structure grasslands:</p> <p>Area may be grazed or burned periodically to meet management objectives. Guideline</p>	Meeting
<p>Oglala and Fall River West GAs Management Area 2.1 Special Interest Area</p> <p>General standard. 1</p>	<p>Allow uses and activities that maintain and enhance the characteristics for which the SIA was designated.</p>	<p>Moving toward</p> <p>Many of the SIAs on the Oglala GA are fenced from livestock.</p>

Source	2001 LRMP Direction	Meeting, Not Meeting, Moving Toward, NA
Fall River West GA MA 3.64 Special Plant and Wildlife Habitat standards and guidelines General 1.	Wetlands habitat will be protected to maintain the hydrology regimes for species viability. Standard	Meeting
Fall River West GA MA 3.64 Special Plant and Wildlife Habitat standards and guidelines General 2.	Maintain disturbance processes (fire, grazing) if required for habitat enhancement, restoration or species viability.	Meeting
Fall River West GA MA 3.64 Special Plant and Wildlife Habitat standards and guidelines General guideline 4	Conflicts that cannot be mitigated are resolved in favor of specific plant and wildlife species and communities.	Meeting If conflicts cannot be mitigated, decisions would favor specific plant and wildlife species and communities.
Fall River West MA 3.64 Special Plant and Wildlife Habitat standards and guidelines Infrastructure 1.	New structural range improvements (fences and water developments) may be constructed as needed to achieve desired future conditions objectives. Guideline	Moving toward This will be considered when such projects are proposed.
Oglala GA MA 5.12 General Forest and Rangelands: Range Vegetation Emphasis Infrastructure guideline 1	When reconstructing water impoundments, consider opportunities to enhance native wildlife and plant species habitat and restoration of natural drainage patterns. Guideline	Meeting This will be considered when such projects are proposed.

\* 2001 LRMP Appendix B - Recommended Fence Specifications for Big Game Movement<sup>1</sup>

<b>Kind of Livestock<sup>2</sup></b>	<b>Big Game Species</b>	<b>Number of Wires</b>	<b>Maximum Height (in)</b>	<b>Wire Spacing (from ground up)</b>	<b>Wire Type<sup>3,4</sup></b>
Cattle only	Deer, Elk, Pronghorn	3	38	16, 10, 12	Bottom smooth
Cattle and Sheep	Deer, Elk, Pronghorn	4	40	16, 6, 6, 12	Bottom smooth
Sheep only	Deer, Elk, Pronghorn	4	32	12, 6, 6, 8	Bottom smooth
Cattle only	Bighorn Sheep	3	39	20, 15, 4	Barbed

<sup>1</sup> These recommendations are designed for facilitating movement of both young and adult big game animals during all seasons including winter and spring when snow drifting can be expected.

<sup>2</sup> No standards are available for bison, but provisions for big game movement should be considered when building bison fences.

<sup>3</sup> Woven (net) wire fences are not recommended.

<sup>4</sup> One or more of the top wires may also be electrified.

## Appendix B: Maps of Improvements under Alternative 2 (Existing Condition) and Alternative 3 (Proposed Action)

Fall River West GA improvement maps

Antelope	Miller 387
Beebe-Markey	Miller 514
Cottonwood Group	Moody
Cow Camp	Mule Creek
Crowe Dam	Plumb-Henry
Danks	Roller
East Association	Ross
East Porter	Simons
Eberle	Stearns
Ellison Dam	Trotter
Fuchs	Trotter/Coal Creek
Furrow	Tubbs
Henry	Van Loan
Honadel	West Association
Indian-Brush Creek	West Porter

Oglala GA improvement maps

Antelope Creek	Roundtop
Ardmore	Sand Creek
Badlands	Sherrill Hills
Benedict Buttes	Short Branch
Boardgate	Toadstool
Hat Creek	Upper Whitehead
Horn	Waldon Hills
Indian-Brush Creek	Warbonnet
Lower Whitehead	Whitehead
Meng Reservoir	York
Montrose	



## APPENDIX C: ALLOTMENT MAPS

Allotment map 1 covers the following allotments:

Beebe-Markey	Ellison Dam	Pfister
Benton	Fossil Point	Porter
Cottonwood Group	Fuchs	Simons
Danks	Honadel	Stearns
East Porter	Hudson	Tubbs
Eberle	Miller 514	West Porter

Allotment map 2 covers the following allotments:

Antelope	Indian Brush	Roller
Brush Creek	Indian Misc.	Trotter/Coal Creek
Cow Camp	Pfister	Simons
Danks	Plumb	Stearns
East Association	Plumb-Henry	West Association
Horse Creek	East Porter	

Allotment map 3 covers the following allotments:

Antelope	Indian Draws	Ross
Ardmore	Long Branch	Short Branch
Cow Camp	Meng Reservoir	Soske
Crowe Dam	Miller 387	Trotter
DeGering	Moody	Van Loan
Furrow	Morris	Waldon Hills
Henry	Mule Creek	Warbonnet
Horsehead	Roller	Wasserburger

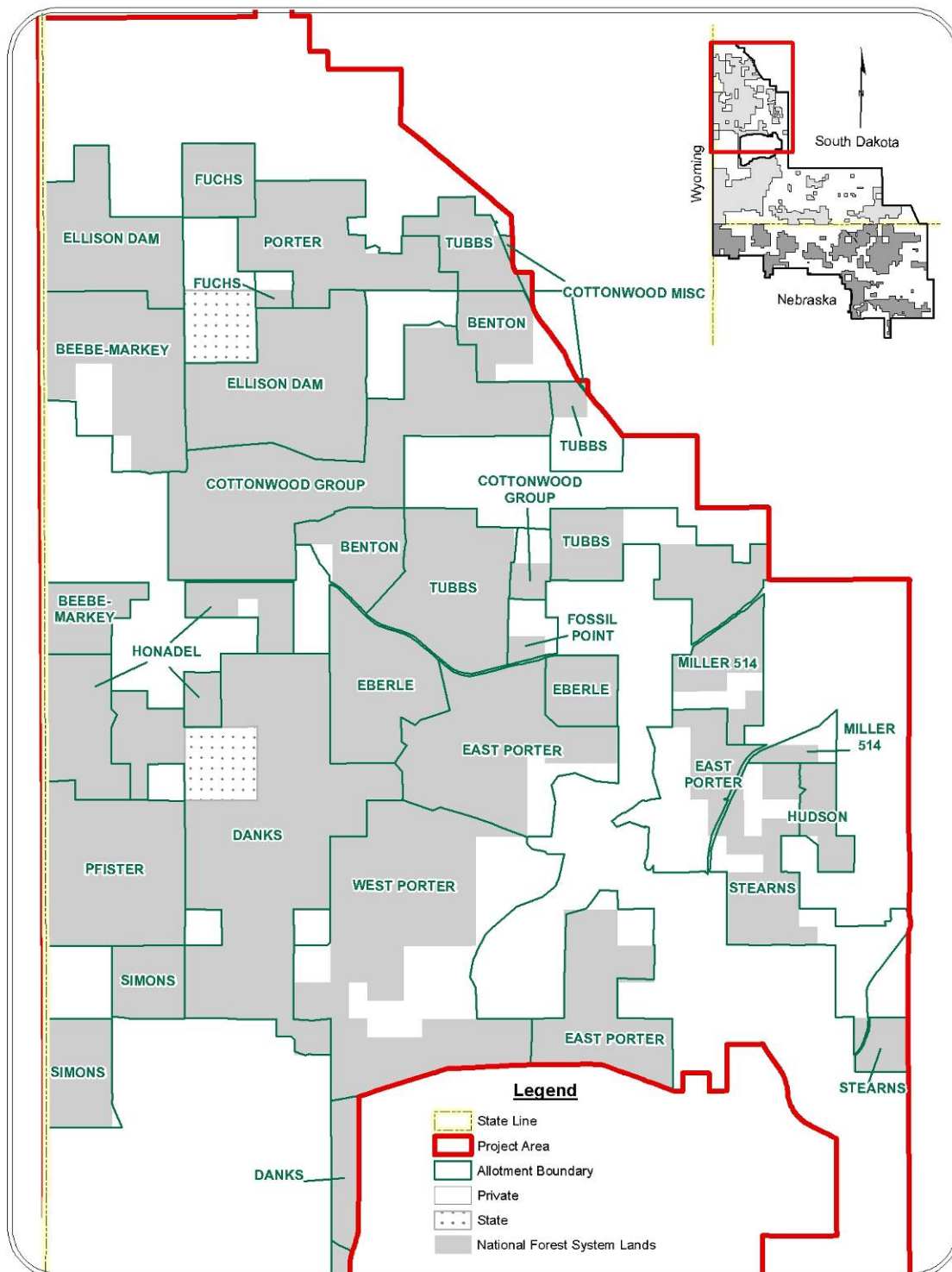
Allotment map 4 covers the following allotments:

Antelope	Horse Creek	Sherrill Hills
Antelope Creek	Indian Brush	Squaw Ridge
Brush Creek	Indian Draws	Trotter
Cow Camp	Indian Misc.	Van Loan
DeGering	Long Branch	Warbonnet
Furrow	Montrose	Whitehead
Grandma Davis Draw	Plumb	York
Hat Creek	Roller	

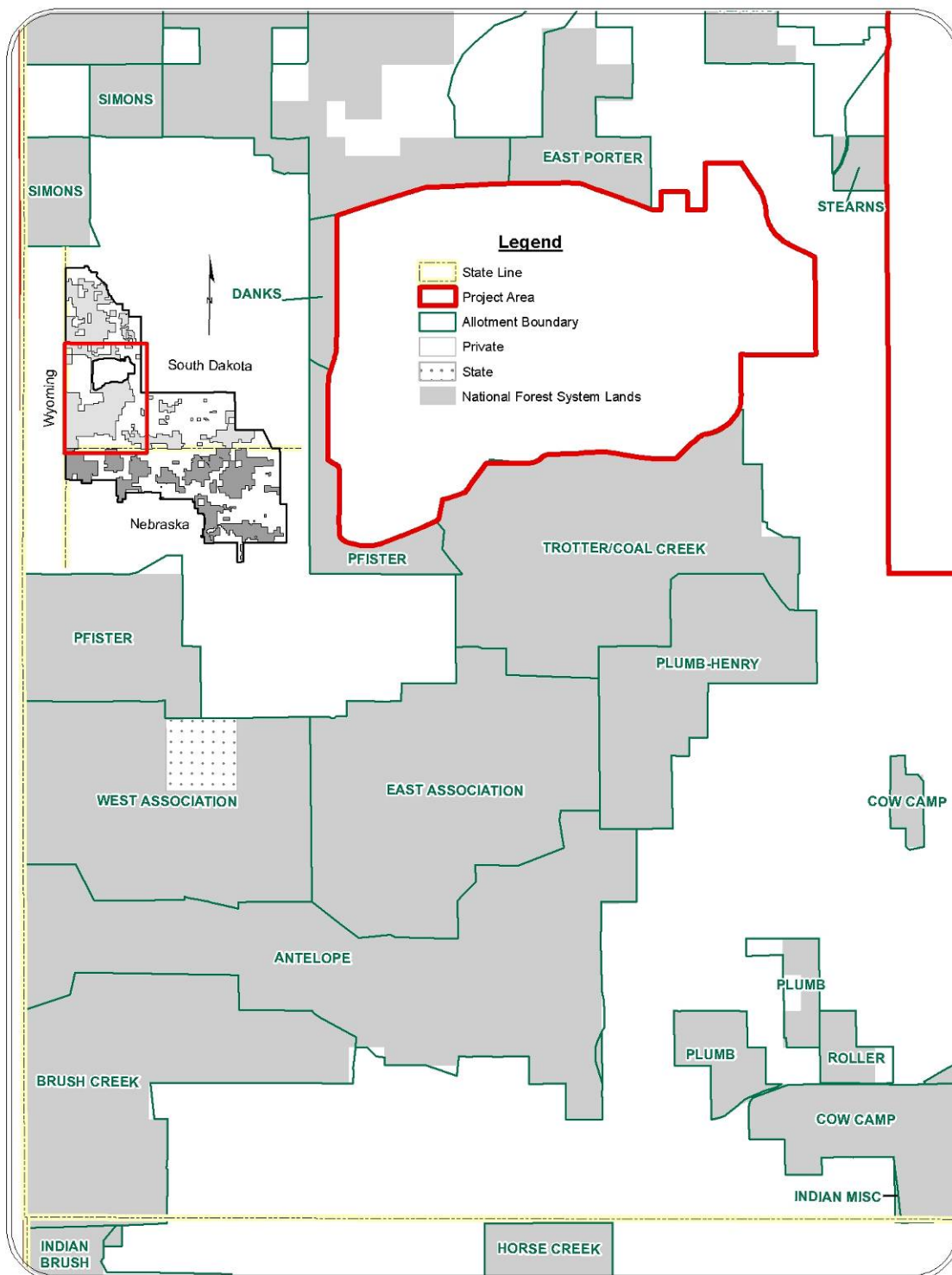
Allotment map 5 covers the following allotments:

Ardmore	Lower Whitehead	Strawstack Butte
Badlands	Meng Reservoir	Sugarloaf
Benedict Buttes	Pete Smith Hill	Toadstool
Boardgate	Prairie Dog	Upper Whitehead
Burlington	Roundtop	Waldon Hills
Eagle Eye	Sand Creek	Whitehead
Horn	Short Branch	Wolf Butte
Long Branch	Sixteen Mile Corner	

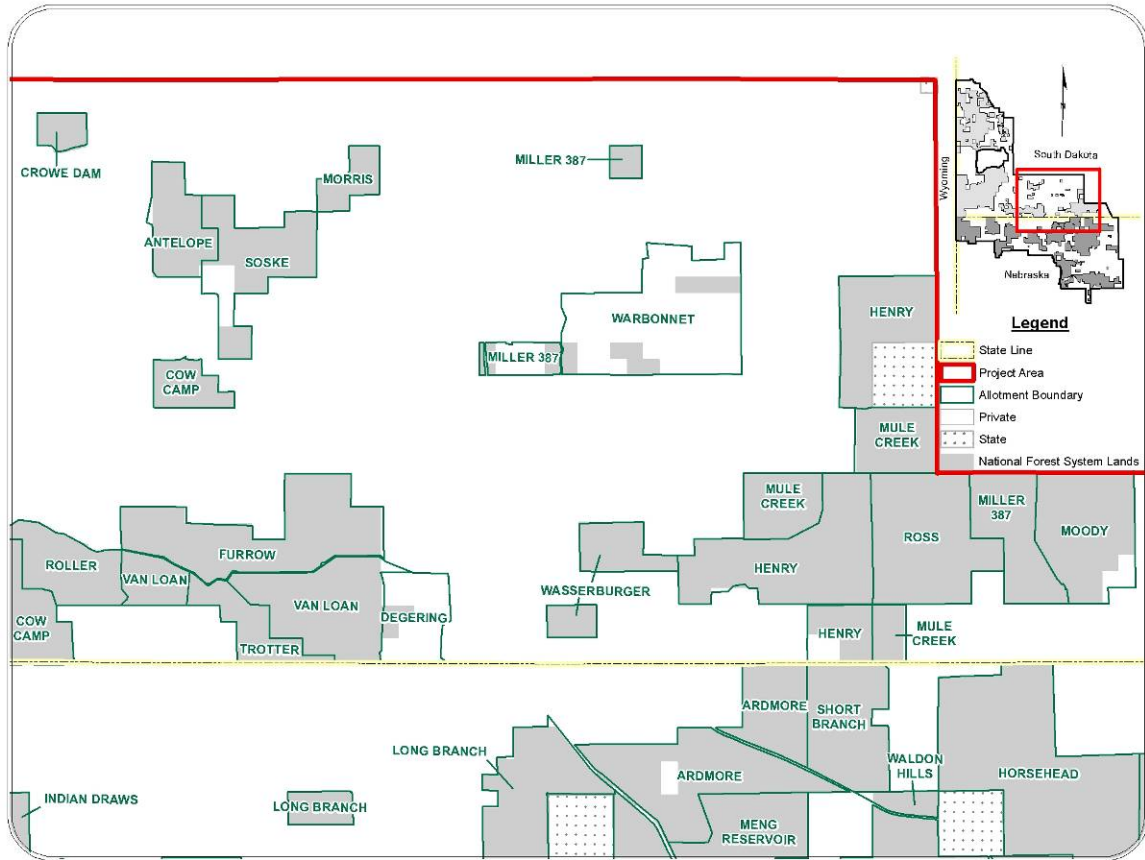
Allotment map 1



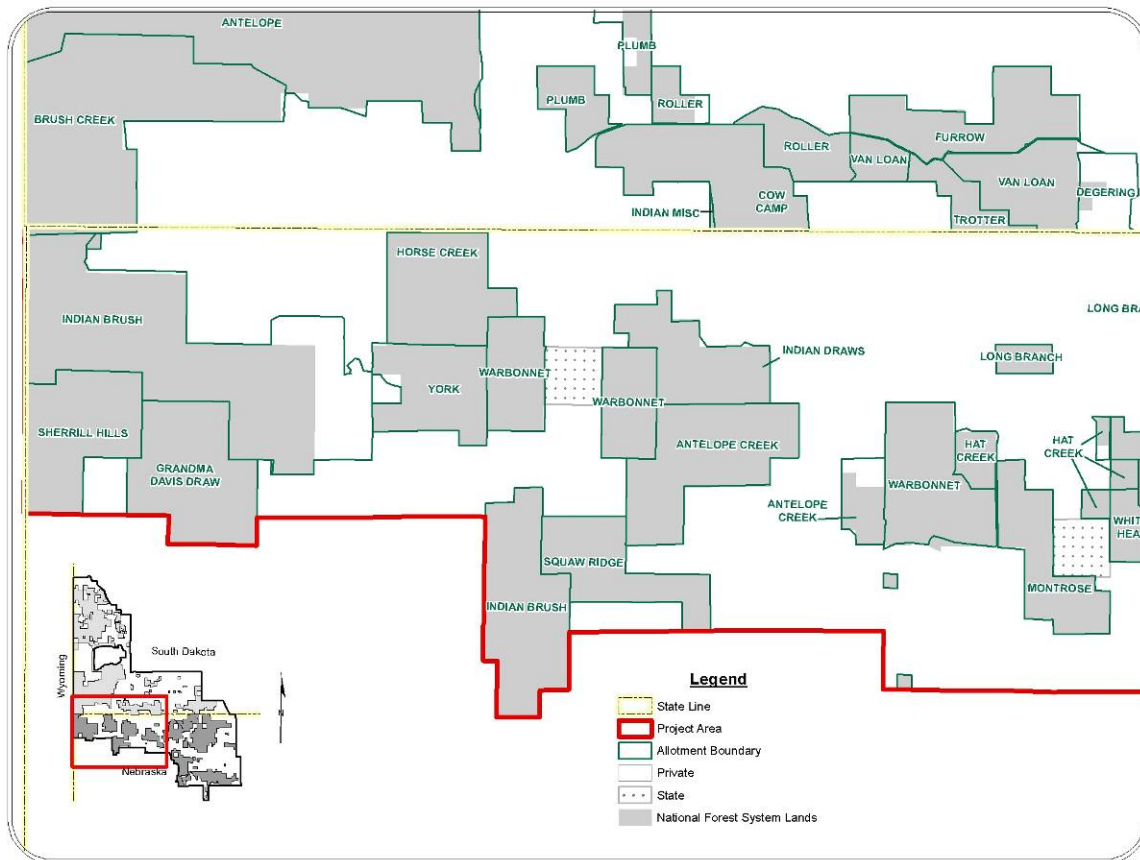
Allotment map 2



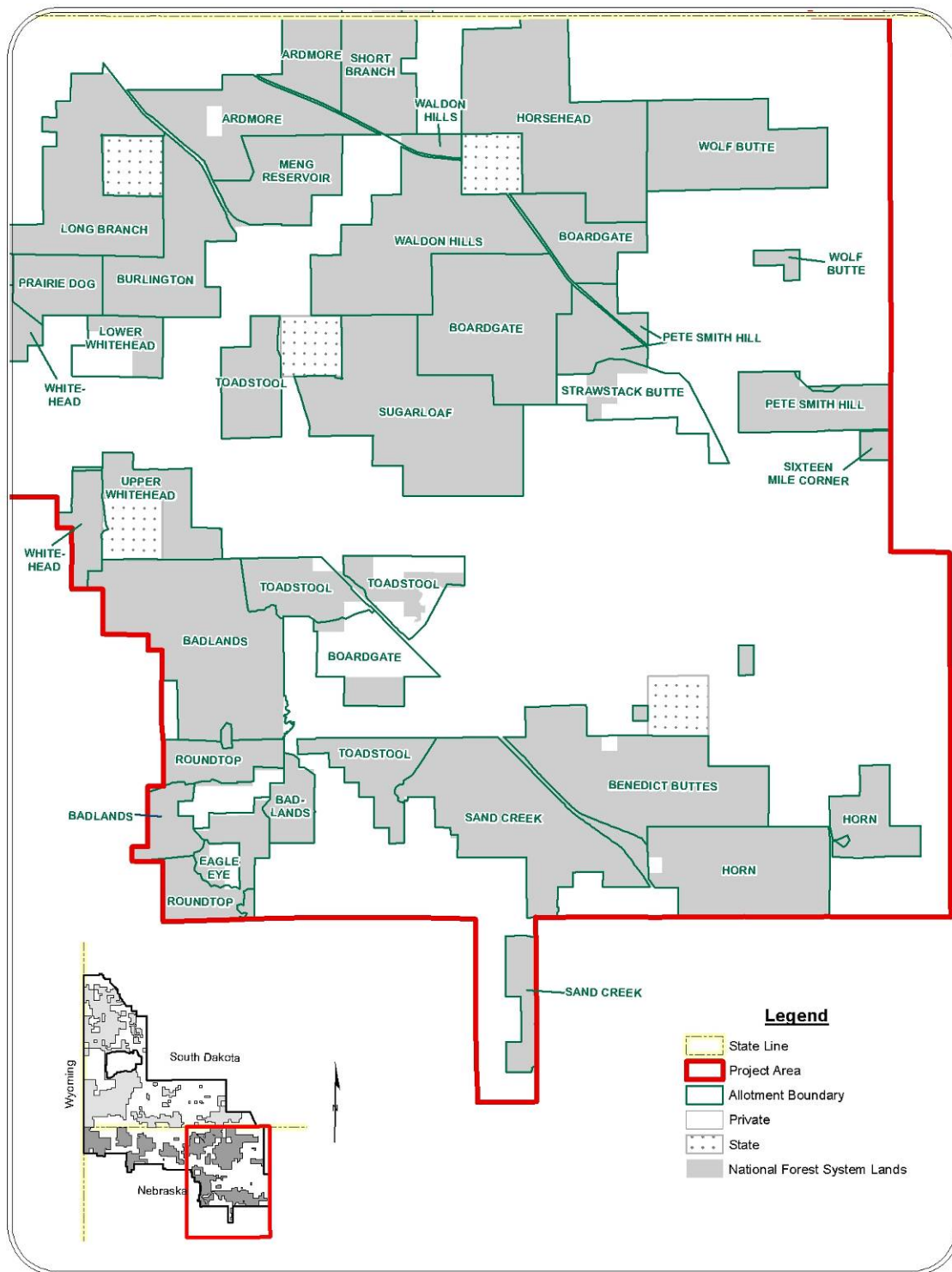
Allotment map 3



Allotment map 4



Allotment map 5





## APPENDIX D

### LITERATURE CITED

- Abele, S.C., V.A. Saab, and E.O. Garton. 2004. Lewis's woodpecker (*Melanerpes lewis*): a technical conservation assessment. [Online]. USDA Forest Service, Rocky Mountain Region. Available: <http://www.fs.fed.us/r2/projects/scp/assessments/lewiswoodpecker.pdf>
- Allardyce D. and M.A. Sovada. 2003. A review of ecology, distribution, and status of swift fox in the United States. pp 3-18. In: M. Sovada and L. Carbyn, editors. The swift fox: ecology and conservation of swift foxes in a changing world. Canadian Plains Research Center, University of Regina. Regina, Saskatchewan Canada.
- Anderson, M.D. 2004. *Sarcobatus vermiculatus*. In: Fire effects information system, [Online]. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer). Available: <http://www.fs.fed.us/database/feis/> .
- Anderson, R.M. 1976. Shrikes feed on prey remains left by hawks. Condor 78: 269.
- Ashton, D.E., and E.M. Dowd. 1991. Fragile legacy; endangered, threatened and rare animals of South Dakota. South Dakota Dept. of Game, Fish and Parks. Rep. 91-04. 150pp.
- Bechard, M.J. and J.K. Schmutz. 1995. Ferruginous hawk (*Buteo regalis*). In: A. Poole and F. Gill, editors. The birds of North America. Academy of Natural Sciences and American Ornithological Union, Washington D.C.
- Blackburn, W.H., R.W. Knight, and M.K. Wood. 1982. Impact of grazing on watersheds. Texas A&M Univ., Texas Agric. Expt. Sta. MP-1496, College Station, Texas, USA.
- Buckhouse, J.C. and G.F. Gifford. 1976. Water quality implications of cattle grazing on a semiarid watershed in southeastern Utah. Journal of Range Management 29(2).
- Chung-MacCoubrey, A.L. 1996. Grassland bats and land management in the Southwest. Pp. 54-63. In D.M. Finch, editor. Ecology and management of western grassland ecosystems. Gen. Tech. Rep. RM-GTR-285. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Forest and Range Experiment Station. 82p.
- Clark, R. J. 1975. A field study of the short-eared owl, *Asio flammeus* (Pontoppidan), in North America. Wildl. Monogr. 47. 67pp.
- Cogan, D., D. Weinacht, and J. Butler. 1997. Ecological evaluation of the potential research natural areas in the Buffalo Gap National Grassland, South Dakota: Crowe Dam Area, Fall River District.
- Collins, C.P. and T.D. Reynolds. 2005. Ferruginous hawk (*Buteo regalis*): a technical conservation assessment. [Online]. USDA Forest Service, Rocky Mountain Region. Available: <http://www.fs.fed.us/r2/projects/scp/assessments/ferruginoushawk.pdf> .
- Connelly J.W., M.A. Schroeder, A.R. Sands, and C.E. Braun. 2000. Guidelines to manage sage grouse populations and their habitats. Wildlife Society Bulletin 28(4): 967-985.
- Connelly J.W., S.T. Knick, M.A. Schroeder, and S.J. Stiver. 2004. Conservation assessment of greater sage-grouse and sagebrush habitat. Western Association of Fish and Wildlife Agencies. Unpublished Report. Cheyenne, Wyoming.
- Council on Environmental Quality (CEQ). 1997. Environmental justice: guidance under the National Environmental Policy Act. Executive Office of the President. 40pp.

- Crawford, J.A., R.A. Olson, N.E. West, J.C. Mosley, M.A. Shroeder, T.D. Whitson, R.F. Miller, Gregg and C.S. Boyd. 2004. Synthesis paper: ecology and management of sage-grouse and sage-grouse management. *J. Range Manage.* 57: 2-19.
- Czaplewski, N.J., J.P. Farney, J.K. Jones, Jr., and J.D. Druecker. 1979. Synopsis of bats of Nebraska. *Occasional Papers, The Museum, Texas Tech University* 61:1–24.
- Dechant, J.A., M.L. Sondreal, D.H. Johnson, L.D. Igl, C.M. Goldade, A.L. Zimmerman, and B.R. Euliss. 2003a. Effects of management practices on grassland birds: American bittern. Northern Prairie Wildlife Research Center, Jamestown, ND. Northern Prairie Wildlife Research Center Online. <http://www.npwrc.usgs.gov/resource/literatr/grasbird/ambi/ambi.htm> (Version 12DEC2003).
- Dechant, J.A., M.L. Sondreal, D.H. Johnson, L.D. Igl, C.M. Goldade, M.P. Nenneman, and B.R. Euliss. 2003b. Effects of management practices on grassland birds: chestnut collared longspur. Northern Prairie Wildlife Research Center, Jamestown, ND. Jamestown, ND: Northern Prairie Wildlife Research Center Home Page. <http://www.npwrc.usgs.gov/resource/literatr/grasbird/index.htm#species>
- Dechant, J.A., M.L. Sondreal, D.H. Johnson, L.D. Igl, C.M. Goldade, M.P. Nenneman, and B.R. Euliss. 2003c. Effects of management practices on grassland birds: Mckown's longspur. Northern Prairie Wildlife Research Center, Jamestown, ND. Jamestown, ND: Northern Prairie Wildlife Research Center Home Page. <http://www.npwrc.usgs.gov/resource/literatr/grasbird/index.htm#species>
- Dechant, J.A., M.L. Sondreal, D.H. Johnson, L.D. Igl, C.M. Goldade, M.P. Nenneman, and B.R. Euliss. 2003d. Effects of management practices on grassland birds: short-eared owl. Northern Prairie Wildlife Research Center, Jamestown, ND. Jamestown, ND: Northern Prairie Wildlife Research Center Home Page. <http://www.npwrc.usgs.gov/resource/literatr/grasbird/index.htm#species>
- Dechant, J.A., M.L. Sondreal, D.H. Johnson, L.D. Igl, C.M. Goldade, M.P. Nenneman, and B.R. Euliss. 2003e. Effects of management practices on grassland birds: grasshopper sparrow. Northern Prairie Wildlife Research Center, Jamestown, ND. Jamestown, ND: Northern Prairie Wildlife Research Center Home Page. <http://www.npwrc.usgs.gov/resource/literatr/grasbird/index.htm#species>
- Degraaf, R.M., V.E. Scott, R.H. Hamre, L. Ernst, and S.H. Anderson. 1991. Forest and rangeland birds of the United States – natural history and habitat use. *In: USDA Forest Service, Agriculture Handbook* 688pp.
- Dinsmore, S.J. 2003. Mountain plover (*Charadrius montanus*): a technical conservation assessment. [Online]. USDA Forest Service, Rocky Mountain Region. Available: <http://www.fs.fed.us/r2/projects/scp/assessments/mountainplover.pdf>
- Dissmeyer, G.E., editor. 2000. Drinking water from forests and grasslands a synthesis of the scientific literature. General Technical Report SRS-39. Southern Research Station, USDA Forest Service. 246p.
- Duebbert, H.F. and J.T. Lokemoen. 1977. Upland nesting of American bitterns, marsh hawks, and short-eared owls. *Prairie Naturalist* 9: 33-40.
- Faber-Landendoen, D., editor. 2001. Plant communities of the Midwest. Association for Biodiversity Information in cooperation with The Nature Conservancy.
- Fertig, W., R. Black, and P. Wolken. 2005. Rangewide status review of Ute ladies'-tresses (*Spiranthes diluvialis*). Available At: <http://efotg.sc.egov.usda.gov/references/public/WY/UtesRangewideStatusReview2005byFertig.pdf>
- Food and Agriculture Organization of the United Nations. No date. Influence of grazing and vegetation on water yields and erosion. *In: The role of domestic livestock in desertification control.* Chapter 8. 5pp. <http://www.fao.org/docrep/X5321E/x5321e08.htm>.

- Freeman, P.W., K.N. Geluso, and J. S. Altenbach. 1997. Nebraska's flying mammals. Museum, University of Nebraska state Mammalogy Papers: University of Nebraska State museum. University of Nebraska Lincoln Available at: <http://digitalcommons.unl.edu/museummammalogy/30>
- Fritcher, S.C. 1998. Bird and small mammal populations in relation to seral stage of mixed-grass prairie, Fort Pierre National Grassland, South Dakota. M.S. Thesis, South Dakota State Univ., Brookings. 128pp.
- Gruver, J.C. and D.A. Keinath. 2006. Townsend's big-eared bat (*Corynorhinus townsendii*): a technical conservation assessment. [Online]. USDA Forest Service, Rocky Mountain Region. Available: <http://www.fs.fed.us/r2/projects/scp/assessments/townsendsbigearedbat.pdf>.
- Hanson, C., L., Armine, R. Kuhlman, and J.K. Lewis. 1978. Effect of grazing intensity and range condition on hydrology of western South Dakota ranges. Bulletin #647. Animal Science Department, South Dakota State University. 54p.
- Hardy, J. Final report, Oglala National Grasslands badlands vegetational survey. 1995. US Forest Service, Nebraska National Forest, NE.
- Harrison R.L. and J. Whitaker-Hoagland. 2003. A literature review of swift fox habitat and den selection. pp 79-89. In M. Sovada and L Carbyn, editors. The swift fox: ecology and conservation of swift foxes in a changing world. Canadian Plains Research Center, University of Regina. Regina, Saskatchewan Canada.
- Higgins, K.F., E. Dowd Stukel, J.M. Goulet, and D.C. Backlund. 2000. Wild mammals of South Dakota. South Dakota Department of Game, Fish and Parks, Pierre, South Dakota, USA.
- High Plains Regional Climate Center (HPRCC). 2012. Edgemont and Harrison precipitation data. 713 Hardin Hall; 3310 Holdrege Street; Lincoln, NE 68583-0997. Available: [http://www.hprcc.unl.edu/data/historical/index.php?state=sd&action=select\\_state&submit=Select+State](http://www.hprcc.unl.edu/data/historical/index.php?state=sd&action=select_state&submit=Select+State) [Accessed Nov 2012].
- Hildebrand, T. Oglala Pasture 1N Potential Research Natural Area. 1996. The Nature Conservancy, Minneapolis, MN.
- Hildebrand, Terri. Oglala Pasture 15 Potential Research Natural Area. 1996. The Nature Conservancy, Minneapolis, MN.
- Hodorff R. 2005. Final report: habitat assessment and conservation strategy for sage grouse and other selected species on Buffalo Gap National Grassland. On file at the Nebraska National Forests and Grasslands supervisor's office. Chadron, NE. 50 pp
- Hodorff R. 2009. Summary of prairie dog inventory and control, Fall River Ranger District, Buffalo Gap National Grassland 1996-2009. On file at the Nebraska National Forests and Grasslands supervisor's office. Chadron, NE.
- Hodorff R. 2011. Report: MA3.64 Special Plant and Wildlife Habitat: sage grouse prairie grouse lek surveys 1991-2011. On file at the Nebraska National Forests and Grasslands supervisor's office. Chadron, NE.
- Holmes, J.A. and M.J. Johnson 2005. Brewer's sparrow (*Spizella breweri*): a technical conservation assessment. [Online]. USDA Forest Service, Rocky Mountain Region. Available: <http://www.fs.fed.us/r2/projects/scp/assessments/brewerssparrow.pdf>.
- Holt, D.W., and S.M. Leasure. 1993. Short-eared owl (*Asio flammeus*). In A. Poole and F. Gill, editors. The birds of North America. Acad. of Nat. Sci., Phil., PA, and American Ornithological Union, Washington D.C.

- Horne, S. and J. McFarland. 1993. Impacts of livestock grazing on cultural resources. Issue Paper. Los Padres National Forest. Santa Barbara, California. On file, Nebraska National Forest, Supervisor's Office, Chadron.
- Howery, L. 1999. Rangeland management before, during, and after drought. University of Arizona Cooperative Extension Publication Number AZ1136.
- Johnsgard, P.A. 1990. Hawks, eagles and falcons of North America. Smithsonian Institution Press. Washington and London. 403p.
- Jones, J.K., Jr., D.M. Armstrong, R.S. Hoffman and C. Jones. 1983. Mammals of the Northern Great Plains. Univ. of Nebraska Press. Lincoln and London. 379p.
- Jones, S.L. 2010. Sprague's pipit (*Anthus spragueii*) conservation plan. U.S. Department of Interior, Fish and Wildlife Service, Washington, D.C.
- Kantrud, H.A. and K.F. Higgins. 1992. Nest and nest site characteristics of some ground-nesting, non-passerine birds of northern grasslands. *Prairie Nat.* 24: 67-84.
- Keinath, D.A. 2004. Fringed myotis (*Myotis thysanodes*): a technical conservation assessment. [Online]. USDA Forest Service, Rocky Mountain Region. Available: <http://www.fs.fed.us/r2/projects/scp/assessments/fringedmyotis.pdf>
- Kennedy, R.S.H. 2008. Landscape analysis and climate change. USDA Forest Service Climate Change Resource Center. <http://www.fs.fed.us/ccrc/topics/landscape-analysis.shtml>.
- Kostal, G.M., R.L. Hartman, and B.E. Nelson. 2006. Floristic survey of the Buffalo Gap National Grassland and Oglala National Grassland. Final report. Rocky Mountain Herbarium, University of Wyoming, Laramie, WY. 74p.
- Kostel, G.M. 2009. *Astragalus barrii* Barneby (Barr's Milkvetch) Survey on the Oglala National Grassland for the Nebraska Game and Parks Commission and Nebraska National Forest. 2009. Nebraska Game and Parks Commission, Lincoln, NE.
- Ladyman, J.A.R. 2006a. *Astragalus barrii* Barneby (Barr's milkvetch): a technical conservation assessment. [Online]. USDA Forest Service, Rocky Mountain Region. Available: <http://www.fs.fed.us/r2/projects/scp/assessments/astragalusbarrii.pdf>
- Ladyman, J.A.R. 2006b. *Eriogonum visherii* A. Nelson (Visher's buckwheat): a technical conservation assessment. [Online]. USDA Forest Service, Rocky Mountain Region. Available: <http://www.fs.fed.us/r2/projects/scp/assessments/eriogonumvisherii.pdf>
- Larson, R. and M. George. 1995. Risks of pathogen and nutrient transmission from grazing livestock to surface water sources based on existing literature. In: Managing hardwood rangelands to maintain and enhance water quality. University of California Sierra Foothill Research and Extension Center. Browns Valley, CA. p.7-14.
- Laycock, W.A. 1967. How heavy grazing and protection affect sagebrush-grass ranges. *J. Range Manage.* 20: 206.
- Lewis, J.C. 1995. Whooping crane (*Grus americana*). In A. Poole and F. Gill, eds. The birds of North America, No. 153. The Acad. of Nat. Sci, Philadelphia, and The American Ornithological Union, Washington, D.C.
- MacWhirter, R.B., and K.L. Bildstein. 1996. Northern harrier (*Circus cyaneus*). In A. Poole and F. Gill, editors. The birds of North America. Acad. of Nat. Sci., Phil., PA, and American Ornithological Union, Washington D.C.

- Marks, R. 2007. Sharp-tailed grouse (*Tympanuchus phasianellus*): Fish and Wildlife Management Leaflet. Number 40. NRCS and the Wildlife Habitat Council.
- McDonald, D., N.M. Korfanta, and S.J. Lantz. 2004. The burrowing owl (*Athene cunicularia*): a technical conservation assessment. [Online]. USDA Forest Service, Rocky Mountain Region. Available: <http://www.fs.fed.us/r2/projects/scp/assessments/burrowingowl.pdf>
- Michigan Department of Natural Resources (MIDNR). 2008. Michigan wolf management plan. Lansing, MI. USA. Available: [http://www.michigan.gov/documents/dnr/Draft\\_Wolf\\_Management\\_Plan\\_030708\\_227742\\_7.pdf](http://www.michigan.gov/documents/dnr/Draft_Wolf_Management_Plan_030708_227742_7.pdf) [Accessed November 2012].
- Milchunas, D.G., J.R. Forwood, and W.K. Lauenroth. 1994. Productivity of long-term grazing treatments in response to seasonal precipitation. *Journal of Range Management* 47(2): 133-139.
- Minnesota IMPLAN Group (MIG). 2009. IMPLAN Professional Version 3.0.
- Nader, G., K.W. Tate, R. Atwill, and J. Bushell. 1998. Water quality effect of rangeland beef cattle excrement. *Rangelands*. 20(5): 19-25.
- NatureServe. 2012. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, Virginia. Available <http://www.natureserve.org/explorer>.
- Naugle, D.E. 2004. Black tern (*Chlidonias niger surinamensis*): a technical conservation assessment. [Online]. USDA Forest Service, Rocky Mountain Region. Available: <http://www.fs.fed.us/r2/projects/scp/assessments/blacktern.pdf>
- Nebraska Department of Water Quality. 2010. 2010 Nebraska Water Quality Report. NDWQ, Water Quality Division. Lincoln, Nebraska. 154p.
- Nebraska Game and Parks Commission. 2005. White/Hat basins – fishes – Ogallala National Grasslands. Fish survey data 7pp.
- North American Bird Conservation Initiative, U.S. Committee, 2009. The state of the birds, United States of America, 2009. U.S. Department of Interior: Washington, DC. 36 pages. Available: <http://www.stateofthebirds.org/2009>.
- Olendorff, R.R. 1993. Status, biology, and management of ferruginous hawks: a review. *Raptor Res. And Tech. Asst. Cen., Spec. Rep. USDI Bureau of Land Management L.M., Boise, ID.*
- Orabona, A., S. Patla, L. Van Fleet, M. Grenier, B. Oakleaf, and Z. Walker. 2009. Atlas of birds, mammals, amphibians, and reptiles in Wyoming. Wyoming Game and Fish Department Nongame Program, Lander. 227pp.
- Osborn, A. and R. Hartley. No date. Adverse effects of domestic livestock grazing on the archaeological resources of Capitol Reef National Park, Utah. Midwest Archeological Center. National Park Service Transactions and Proceedings Series 10: 136-153. On file, Nebraska National Forest, Supervisor's Office, Chadron.
- Osborn, A., S. Vetter, R. Hartley, L. Walsh and J. Brown. 1987. Impacts of domestic livestock grazing on the archeological resources of Capitol Reef National Park, Utah. Midwest Archeological Center Occasional Studies in Anthropology, No. 20. On file, Nebraska National Forest, Supervisor's Office, Chadron.
- Peterson, D.L., C.I. Millar, L.A. Joyce, M.J. Furniss, J.E. Halofsky, R.P. Neilson, and T.L. Morelli. 2011. Responding to climate change on national forests: A guidebook for developing adaptation options. Gen. Tech. Rep. PNW-GTR-855. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. 109 p.

- Peterson E. 2007. Managing through drought. Sustainable management of rangeland resources.  
<http://www.wyorange.net/Drought/mgthdrot.html> p 1-2
- Peterson J., R. Funston, R. Carlstrom, G. Lardy. No date. Drought management strategies for beef cattle. Cow-calf Management library. Montana. On file, Nebraska National Forest, Supervisor's Office, Chadron.
- Peterson, R.A., compiler. 1993. Birds of the Nebraska Pine Ridge. Nebraska National Forest (Pine Ridge Ranger District) and Oglala National Grassland. Field checklist. USDA Forest Service.
- Peterson, R.A. 1995. The South Dakota breeding bird atlas. S. D. Ornithologists' Union, Northern State Univ., Aberdeen. 276pp.
- Prentiss, W.C. and R.G. Rosenberg. 1996. Cultural resource overview of the Nebraska National Forest. Frontier Archaeology, Worland.
- Prichard, D. 1993. Riparian area management: process for assessing proper functioning condition. Technical Reference 1737-9. USDI Bureau of Land Management. 51p.  
<ftp://ftp.blm.gov/pub/nstc/techrefs/Final%20TR%201737-9.pdf>
- Quimby, Chuck. 2007. A practical approach to adaptive management with a specific focus on livestock management NEPA-based decisions. USDA Forest Service. Golden, CO.
- Rahel, F.J. and L.A. Thel. 2004a. Flathead chub (*Platygobio gracilis*): a technical conservation assessment. USDA Forest Service, Rocky Mountain Region. Available:  
<http://www.fs.fed.us/r2/projects/scp/assessments/flatheadchub.pdf>.
- Rahel, F.J. and L.A. Thel. 2004b. Sturgeon chub (*Macrhybopsis gelida*): a technical conservation assessment. [Online]. USDA Forest Service, Rocky Mountain Region. Available:  
<http://www.fs.fed.us/r2/projects/scp/assessments/sturgeonchub.pdf> [date of access].
- Real West Natural Resource Consulting. 2002. Wyoming Bureau of Land Management statewide programmatic biological assessment for whooping cranes (*Grus americana*). Bureau of Land Management, Cheyenne, Wyoming. Available at  
<http://www.blm.gov/pgdata/etc/medialib/blm/wy/wildlife/whoopingcrane.Par.45934.File.dat/wcrane-ba.pdf>
- Reece P.E., J.D. Alexander III, J.R. Johnson. 1991. Drought management on range and pastureland: a handbook for Nebraska and South Dakota. Nebraska Cooperative Extension Service EC 91-123. p 1-5, p 11-12, p 18-20.
- Rees, D.E., R.J. Carr, and W.J. Miller. 2005. Plains minnow (*Hybognathus placitus*): a technical conservation assessment. [Online]. USDA Forest Service, Rocky Mountain Region. Available:  
<http://www.fs.fed.us/r2/projects/scp/assessments/plainsminnow.pdf>
- Rich, T.D., C.J. Beardmore, H. Berlanga, P.J. Blancher, M.S.W. Bradstreet, G.S. Butcher, D.W. Demarest, E.H. Dunn, W.C. Hunter, E.E. Inigo-Elias, J.A. Kennedy, A.M. Martell, A.O. Panjabi, D.N. Pashley, K.V. Rosenberg, C.M. Rustay, J.S. Wendt, T.C. Will. 2004. Partners in Flight North American landbird conservation plan. Cornell Lab of Ornithology. Ithaca, NY. Available:  
[http://www.pwrc.usgs.gov/pif/cont\\_plan/](http://www.pwrc.usgs.gov/pif/cont_plan/)
- Rimbley, T. and L.A. Torrell. 2011. Grazing costs: what's the current situation? University of Idaho. Moscow, Idaho.
- Robbins, C.S., B. Bruun, and H.S. Zim. 1983. A guide to field identification: birds of North America. New York, NY: Golden Press.
- Rolfsmeier, S. 1996. A survey of the vegetation of clay pans and associated communities on the Oglala National Grasslands, Nebraska. Nebraska Game and Parks Commission, Lincoln, NE.

- Rolfsmeier, S. 1998. A vegetation survey of selected riparian areas on the Oglala National Grasslands, Dawes and Sioux Counties, Nebraska. Nebraska Game and Parks Commission, Lincoln, NE.
- Rolfsmeier, S. 1998. Ecological evaluation for the prairie dog potential research natural area, Oglala National Grassland, Sioux County, NE.
- Rolfsmeier, S. and G. Steinauer. 2010. Terrestrial ecological systems and natural communities of Nebraska. Nebraska Natural Heritage Program and Nebraska Game and Parks Commission, Lincoln, NE.
- Rowland, M.M. 2004. Effects of management practices on grassland birds: greater sage-grouse. Northern Prairie Wildlife Research Center, Jamestown, ND. Northern Prairie Wildlife Research Center Online. <http://www.npwrc.usgs.gov/resource/literatr/grasbird/grsg/grsg.htm> (Version 12AUG2004).
- Russel T.A. 2006. Habitat selection by swift foxes in Badlands National Park and the surrounding area. M.S. Thesis. South Dakota State University. Brookings, SD. 104 pp.
- Schmutz, J.K., and D.J. Hungle. 1989. Population of ferruginous and Swainson's hawks increase in synchrony with ground squirrels. *Can J. Zool.* 67: 2596-2601.
- Schneider, R., M. Humpert, K. Stoner, and G. Steinauer. 2005. The Nebraska natural legacy project – a comprehensive wildlife conservation strategy. Nebraska Game and Parks Commission, Lincoln, NE
- Sedgwick, J.A. 2004a. Chestnut-collared longspur (*Calcarius ornatus*): a technical conservation assessment. [Online]. USDA Forest Service, Rocky Mountain Region. Available: <http://www.fs.fed.us/r2/projects/scp/assessments/chestnutcollaredlongspur.pdf>
- Sedgwick, J.A. 2004b. McCown's longspur (*Calcarius mccownii*): a technical conservation assessment. [Online]. USDA Forest Service, Rocky Mountain Region. Available: <http://www.fs.fed.us/r2/projects/scp/assessments/mccownslongspur.pdf>
- Sedgwick, J.A. 2006. Long-billed curlew (*Numenius americanus*): a technical conservation assessment. [Online]. USDA Forest Service, Rocky Mountain Region. Available: <http://www.fs.fed.us/r2/projects/scp/assessments/longbilledcurlew.pdf> .
- Sedivec, K. 1992. Water quality: the rangeland component. NDSU Extension Service Publication. R-1028. 10p. <http://www.ext.nodak.edu/extpubs/plantsci/hay/r1028.htm>
- Selby, G. 2005. Ottoe skipper (*Hesperia ottoe* W.H. Edwards): a technical conservation assessment. [Online]. USDA Forest Service, Rocky Mountain Region. Available: <http://www.fs.fed.us/r2/projects/scp/assessments/ottoeskipper.pdf> .
- Selby, G. 2007. Regal fritillary (*Speyeria idalia Drury*): a technical conservation assessment. [Online]. USDA Forest Service, Rocky Mountain Region. Available: <http://www.fs.fed.us/r2/projects/scp/assessments/regalfritillary.pdf>.
- Shea, J.J. and J.D. Klenck. 1993 An experimental investigation of the effects of trampling on the results of lithic microwear analysis. *Journal of Archaeological Sciences* 20: 175-194. On file, Nebraska National Forest, Supervisor's Office, Chadron.
- Sibley, D.A. 2000. The Sibley guide to birds. National Audubon Society. Alfred A. Knopf, New York, N.Y. 545pp.
- Sioux County. 2000. Government online. Accessed May 10, 2011. <http://www.co.sioux.ne.us>.
- Slater, G.L. 2004. Grasshopper sparrow (*Ammodramus savannarum*): a technical conservation assessment. [Online]. USDA Forest Service, Rocky Mountain Region. Available: <http://www.fs.fed.us/r2/projects/scp/assessments/grasshoppersparrow.pdf>

- Slater, G.L. 2006. Trumpeter swan (*Cygnus buccinator*): a technical conservation assessment. [Online]. USDA Forest Service, Rocky Mountain Region. Available:  
<http://www.fs.fed.us/r2/projects/scp/assessments/trumpeterswan.pdf>
- Slater, G.L. and C. Rock. 2005. Northern harrier (*Circus cyaneus*): a technical conservation assessment. [Online]. USDA Forest Service, Rocky Mountain Region. Available:  
<http://www.fs.fed.us/r2/projects/scp/assessments/northernharrier.pdf> .
- Smeins, F.E. 1975. Effects of livestock grazing on runoff and erosion. In: Proc. Symp. Comm. On Watershed Manage., Irrigation and Drainage Div., Amer. Soc. Of Civ. Engr., Utah Sec. Utah State Univ., Logan, Utah, U.S.A. Aug. 11-13.
- Smith, B.E. and D.A. Keinath. 2005. Plains leopard frog (*Rana blairi*): a technical conservation assessment. [Online]. USDA Forest Service, Rocky Mountain Region. Available:  
<http://www.fs.fed.us/r2/projects/scp/assessments/plainsleopardfrog.pdf>
- Smith, B.E. and D.A. Keinath. 2007. Northern leopard frog (*Rana pipiens*): a technical conservation assessment. [Online]. USDA Forest Service, Rocky Mountain Region. Available:  
<http://www.fs.fed.us/r2/projects/scp/assessments/northernleopardfrog.pdf> .
- South Dakota Bat Working Group. 2004. The South Dakota bat management plan. South Dakota Game Fish and Parks Wildlife division report 2004-2008. Available at: <http://gfp.sd.gov/wildlife/docs/bat-managment-plan.pdf>
- South Dakota Department of Agriculture. No date. Recommended best management practices for avoidance of degradation of wetlands and water quality in South Dakota. Office of State Wetlands Coordinator, Division of Conservation. Pierre, SD. 24p.
- South Dakota Department of Environment and Natural Resources. 2010. The 2010 South Dakota report to Congress 305(b) water quality assessment. Pierre, South Dakota. 272p.
- South Dakota Game, Fish, and Parks. 2009. Rare, threatened, or endangered plants: tracked by the South Dakota Natural Heritage Program. Accessed July 27, 2011.  
<http://www.gfp.sd.gov/wildlife/threatened-endangered/rare-plant.aspx>
- Steinauer, R. 2008. 2008 vegetation survey of Oglala National Grassland units 34A, 35, 36, and 36A. Informal report.
- Stephens, R. M. and S. H. Anderson. 2005. Swift fox (*Vulpes velox*): a technical conservation assessment. [Online]. USDA Forest Service, Rocky Mountain Region. Available:  
<http://www.fs.fed.us/r2/projects/scp/assessments/swiftfox.pdf>
- Tallman, D.A., D.L. Swanson, and J.S. Palmer. 2002. Birds of South Dakota. South Dakota Ornithological Union, Northern State Univ., Aberdeen. 441pp.
- Tigner, J. and E. Dowd-Stukel. 2003. Bats of the Black Hills: a description of status and conservation needs. South Dakota Department of Game, Fish And Parks Wildlife Division Report 2003-05. Available: <http://gfp.sd.gov/wildlife/management/diversity/docs/battechreport.pdf>
- Tigner, J. 2007. Bats surveys Buffalo Gap National Grassland, 2007. Report to South Dakota Department of Game Fish and Parks, Rapid City South Dakota. 42pp.
- Todd, L.C., O. Burger, P.C. Burnett, R.T. Walker, S. Larson, M. Finkelstein, A. Klein, A. Fredrick, and D.J. Rapson. 2000. Oglala National Grassland survey 1998-2000: baseline data for monitoring long-term grazing impacts on archaeological materials. Laboratory of Human Paleoecology, Department of Anthropology, Colorado State University. On file, Nebraska National Forest, Supervisor's Office, Chadron.

- Tucker, R. and M. Wollesen. 2009. 2009 Pine Ridge bighorn sheep annual progress report. Nebraska Game and Parks Commission. Pine Ridge Field Office, Crawford, NE.
- University of California Cooperative Extension. No date. Grazing effects on riparian areas. Fact sheet no. 14. 3p. <http://danr.ucop.edu/uccelr/h14.htm>.
- Uresk, DW; RM. King, J. Javersak, and T.M Juntti. 2009. Ecological classification and monitoring. <http://www.fs.fed.us/rangelands/ecology/ecologicalclassification/index.shtml>
- U.S. Bureau of Labor Statistics. Local Area Unemployment Statistics. Accessed 10 May 2011. <[www.bls.gov/lau](http://www.bls.gov/lau)>.
- U.S. Census Bureau. 2000. Decennial Census. Accessed 16 April 2010. <<http://www.factfinder.census.gov>>.
- U.S. Census Bureau. 2008. Population Estimates Program. Accessed 20 April 2011. <<http://www.factfinder.census.gov>>.
- U.S. Census Bureau. 2010. Census Redistricting Data. Accessed 20 April 2011. <<http://www.factfinder2.census.gov>>.
- U.S. Environmental Protection Agency. 2003. 4E: Grazing management. *In*: National management measures to control nonpoint source pollution from agriculture. Office of Water. EPA-841-B-03-004. p 4-129 – 4-156. <http://www.epa.gov/pwowntr1/NPS/MMGI/Chapter2/ch2-2e.html>.
- U.S. Environmental Protection Agency. 2010. Pasture, rangeland, and grazing operations – best management practices. Accessed July 21, 2011. <http://www.epa.gov/oecaagct/anprgbmp.html>
- U.S. Environmental Protection Agency. 2011. Glossary of climate change terms. Accessed July 22, 2011. <http://www.epa.gov/climatechange/glossary.html>
- USDA Forest Service. 1996. Rangeland analysis and management training guide. USDA Forest Service, Rocky Mountain Region. Denver, CO.
- USDA Forest Service. 2001a. Appendix H – biological assessment and evaluation. Final environmental impact statement for the Northern Great Plains management plans revision. On file in the administrative record. Nebraska National Forest. Chadron, NE.
- USDA Forest Service. 2001b. Final environmental impact statement for the northern Great Plains management plans revision. On file in the administrative record. Nebraska National Forest. Chadron, NE. <http://www.fs.fed.us/ngp/plan/feis.htm>
- USDA Forest Service. 2001c. Land and resource management plan, Nebraska National Forest and associated units, Rocky Mountain Region. On file in the administrative record. Nebraska National Forest. Chadron, NE. [http://www.fs.fed.us/ngp/plan/feis\\_plan\\_nebraska.htm](http://www.fs.fed.us/ngp/plan/feis_plan_nebraska.htm)
- USDA Forest Service. 2007. Interim update of the 2000 Renewable Resources Planning Act assessment. Pub. FS-874, 21. Accessed July 21, 2011. <http://www.fs.fed.us/research/rpa/pubs-supporting-interim-update-of-2000-rpa-assessment.shtml>
- USDA Forest Service. 2008a. Climate change and site-specific range allotment analysis. Unpublished white paper by the Sawtooth National Forest. On file at the Nebraska National Forest supervisor's office. Chadron, NE.
- USDA Forest Service. 2009a. QuickSilver Version 6.0 Economic efficiency analysis tool (QuickSilver).
- USDA Forest Service. 2009b. Climate change considerations in project level NEPA analysis. Letter and attachment from Joel Holtrop Deputy Chief, USDA Forest Service. January 13, 2009.
- USDA Forest Service. 2010. Forest economic analysis spreadsheet tool (FEAST).

- USDA Forest Service. 2012a. Burned Area Report. On file in the project record at the NNFG supervisor's office. Chadron, NE.
- USDA Forest Service. 2012b. Regional forester's sensitive species list available:  
[http://fsweb.r2.fs.fed.us/rr/R2\\_TES\\_Site\\_2007/sensitive.html#list](http://fsweb.r2.fs.fed.us/rr/R2_TES_Site_2007/sensitive.html#list).
- USDA Forest Service and Nebraska Game and Parks Commission. 2003. Steer Creek fish survey on the McKelvie National Forest. Bessey Ranger District. Halsey, NE. Unpublished report. Unpublished report. Nebraska National Forest. Halsey, NE. 8p.
- USDA National Agricultural Statistics Service. 2009. QuickStats Version 1. Accessed 23 April 2010. <<http://www.nass.usda.gov>>.
- USDA National Agricultural Statistics Service. 2011. Grazing fee rates, 2008-2010. Accessed 12 May 2011. <<http://www.nass.usda.gov/QuickStats>>.
- USDA National Agricultural Statistical Services. No date. Chart of U.S. cattle inventory from 1872 to 2012. [http://www.nass.usda.gov/Charts\\_and\\_Maps/Cattle/inv.asp](http://www.nass.usda.gov/Charts_and_Maps/Cattle/inv.asp).
- USDA Natural Resource Conservation Service. 2010. Fence considerations in sage-grouse habitat [web application]. Available: [http://www.or.nrcs.usda.gov/programs/sage-grouse/fy10/data/SGI\\_Fence-Considerations\\_Fact\\_Sheet.pdf](http://www.or.nrcs.usda.gov/programs/sage-grouse/fy10/data/SGI_Fence-Considerations_Fact_Sheet.pdf).
- USDA Natural Resource Conservation Service. 2011a. Field office technical guide [web application]. Available <http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/technical/fotg>.
- USDA Natural Resource Conservation Service. 2011b. Plants data base [web application]. Available <http://plants.usda.gov/java/>.
- U.S. Fish and Wildlife Service. 2000. Endangered and threatened wildlife and plants; 12-month finding for a petition to list the black-tailed prairie dog as threatened. Federal Register 65(24).
- U.S. Fish and Wildlife Service. 2004. Endangered and threatened wildlife plants; finding for the resubmitted petition to list the black-tailed prairie dog as threatened. Federal Register 69 (159): 51217-51226.
- U.S. Fish and Wildlife Service. 2010. Endangered, threatened, proposed, and candidate species in Nebraska counties. Available:  
<http://www.fws.gov/mountain%2Dprairie/endspp/CountyLists/Nebraska.pdf>.
- U.S. Fish and Wildlife Service. 2011. Endangered species program. Available:  
[http://www.fws.gov/southdakotafielddoffice/endangered\\_species\\_newVersionP2.htm](http://www.fws.gov/southdakotafielddoffice/endangered_species_newVersionP2.htm)
- USGS Patuxent Wildlife Research Center. 2012. North American breeding bird survey. Available:  
<https://www.pwrc.usgs.gov/BBS/PublicDataInterface/index.cfm> [Accessed January 2012].
- Vallentine, J.F. 2001. Grazing management. Academic Press, San Diego, CA.
- Vickery, P.D. 1996. Grasshopper sparrow (*Ammodramus savannarum*). In A. Poole and F. Gill, editors. The birds of North America. Acad. of Nat. Sci., Phil., PA, and American Ornithological Union, Washington, D.C.
- Walker, B. 2004. Effects of management practices on grassland birds: Brewer's sparrow. Northern Prairie Wildlife Research Center, Jamestown, ND. Online.  
<http://www.npwrc.usgs.gov/resource/literatr/grasbird/brsp/brsp.htm> (Version 12AUG2004).
- Wallestad, R. 1975. Life history and habitat requirements of sage grouse in central Montana. Game Management Division, Montana Department of Fish and Game, Helena, Montana.

- Ward, T.A., K.W. Tate, E.R. Atwill, D.F. Lile, D.L. Lancaster, N. McDonald, S. Barry, R.S. Ingram, H.A. George, W. Jensen, W.E. Frost, R. Larsen, J.M. Harper, M.R. Horney, G.G. Markegard, S. Larson, R. Phillips, R. Delmas, J. Farley, and L.C. Foreo. No date. Riparian friendly grazing. University of California. 8p. [http://danrrec.ucdavis.edu/sierra\\_foothill/sfrcc\\_2003\\_ward\\_riparian\\_grazing.pdf](http://danrrec.ucdavis.edu/sierra_foothill/sfrcc_2003_ward_riparian_grazing.pdf).
- Wiggins, D.A. 2004. Short-eared owl (*Asio flammeus*): a technical conservation assessment. (Online). USDA Forest Service, Rocky Mountain Region. Available: <http://www.fs.fed.us/r2/projects/scp/assessments/shortearedowl.pdf>
- Wiggins, D.A. 2005a. Loggerhead shrike (*Lanius ludovicianus*): a technical conservation assessment. [Online]. USDA Forest Service, Rocky Mountain Region. Available: <http://www.fs.fed.us/r2/projects/scp/assessments/loggerheadshrike.pdf>.
- Wiggins, D.A. 2005b. Yellow-billed cuckoo (*Coccyzus americanus*): a technical conservation assessment. [Online]. USDA Forest Service, Rocky Mountain Region. Available: <http://www.fs.fed.us/r2/projects/scp/assessments/yellowbilledcuckoo.pdf>.
- Wiggins, D.A. 2006. American bittern (*Botaurus lentiginosus*): a technical conservation assessment. [Online]. USDA Forest Service, Rocky Mountain Region. Available: <http://www.fs.fed.us/r2/projects/scp/assessments/americanbittern.pdf>.
- Willingham, C.G. 1994. The Kyle Canyon site, Butte County, Idaho: the localized effects of livestock on an open-air aboriginal site. Paper presented at the USDA Forest Service Region 4 Range Workshop, Salt Lake City, Utah. On file, Nebraska National Forest, Supervisor's Office, Chadron.
- Wollesen, M. 2008. Fort Robinson bighorn sheep herd December 2008 quarterly report summary. Nebraska Game and Parks Commission. Pine Ridge Field Office, Crawford, NE.
- Wollesen, M. 2009. Fort Robinson bighorn sheep herd quarterly report summary October - December, 2009. Nebraska Game and Parks Commission. Pine Ridge Field Office, Crawford, NE.

## APPENDIX E: COMMENTS AND RESPONSES

The DEIS was released for public review and comment in February 2010. The comment period closed on September 1, 2010 after several extensions. The forest received comments from approximately 10 individuals, agencies, and organizations. The ID team identified 115 individual comments from the letters and email received.

Comments were separated into themes by resource topics and assigned to the appropriate specialist or specialists for initial review and response. Multiple comments on the same topic were grouped into one comment. Final responses to the comments were reviewed and edited by the ID team. Comments and responses are listed below.

Comment		Response
<b>Additional analysis or additions to the documents</b>		
1.	To claim that a large portion of the analysis area "evolved under a history of homesteading in the early twentieth century" is to mislead the public by substituting secular history for natural history that spans millennia. We request the FS offer the public a serious biological and ecological account of the condition of the project area prior to large scale disturbance of the land in the 1900s.	Chapter 3 of the FEIS includes existing condition discussions for rangeland vegetation; rare plant communities; endangered, threatened, proposed, candidate, sensitive, and management indicator species; hydrology and soil resources; cultural resources; paleontological resources; recreation; and social and economic resources. These existing conditions are the result of past natural and anthropogenic influences.
2.	The Service must have prepared an adequate analysis that shows the relative values of the different types of land on the forest, and it has to consider how private land may or may not be able to supply the same type of needs on a national basis. It is our assertion that this type of "relative values" analysis was either never conducted and/or its data ignored.	Analysis of environmental effects from the alternatives is presented in the FEIS and includes the following resources: rangeland vegetation; rare plants; endangered, threatened, proposed, candidate, sensitive, and management indicator species; climate change, water quality; cultural and paleontological resources; recreation and social and economic resources. Analysis at a national scale is outside the scope of this site-specific project.
3.	On the contrary, the case law up to this point gives the agency discretion to determine the proper uses for various localized areas of the forest. We assert that the Nebraska National Forest has failed to apply its discretion to protect an imperiled species, now a candidate for protection under the Endangered Species Act.	Determinations for, and analysis of effects to, wildlife species, including greater sage grouse, are discussed in the BABE and summarized in chapter 3 of the FEIS.

Comment		Response
4.	If the Forest is going to exclude a certain multiple use e.g., biological diversity, from a particular area, it must provide an adequate analysis that shows the relative values of the different types of land on the forest, and it has to consider how private land may or may not be able to supply the same types of needs on a national basis. We contend that the Service has failed and continues to fail to provide such analysis.	Analysis of environmental effects from the alternatives is presented in the FEIS and includes the following resources: rangeland vegetation; rare plants; endangered, threatened, proposed, candidate, sensitive, and management indicator species; climate change, water quality; cultural and paleontological resources; recreation and social and economic resources. Analysis at a national scale is outside the scope of this site-specific project.
5.	We request the Service honor its mandate to abide by all laws governing its decision-making and to consider and act upon the best science available as it moves forward with this proposed project.	Consideration of best available science was direction under a previous planning rule which was recently superseded by new regulations (Federal Register, April 9, 2012, pp. 21162-21274). The transition language of the new regulations state that "no obligations remain from any prior planning regulation, except those that are specifically included in a unit's existing plan" (36 CFR 219.17(c) - 2012 rule). This is disclosed in the RODs in the <i>Consistency with NFMA</i> section.
6.	EPA recommends including all or some of the following categories for consideration; Hydrology & Soil Resources, Land Use (including Prime & Unique Farmlands), Air Quality, Noise, and Esthetics/Visual Resources. Some of these categories may not be affected by or affect the project but should be considered and if no relevance is found, the finding of lack of impacts to or from the project should be stated in the environmental impact statement. While a Water Quality category is included, it may be more contextual to incorporate subcategories such as Surface, Groundwater, and Wetlands.	The water quality specialist report and FEIS Chapter 3 were updated to include information from Nebraska's 2012 <i>Water Quality Integrated Report</i> and the 2012 <i>South Dakota Integrated Report for Surface Water Quality Assessment</i> . More information was also added to both documents to address the comment about including information on soil resources, surface water, and wetlands. Visual resources are discussed in the recreation specialist report and the recreation section of the FEIS. In the October 2012 ID team meeting, the team considered land use, air quality, and noise and validated that they were either not brought forth as issues during scoping or were not affected by livestock grazing in the project area.

Comment		Response
7.	<p>Direction listed on page A-2 states that "In the water influence zone next to perennial and intermittent streams, lakes, and wetlands, allow only those actions that maintain or improve long-term health and riparian ecosystem condition." While it is understood that the proposed adaptive management process would allow for site-dependent flexibility in management and mitigation practices, it would be useful in instances such as these to include at least a few specific examples of practices and procedures that may be used to meet these directives and how health &amp; condition will be measured.</p>	<p>The water quality specialist report (<i>Environmental Consequences</i> section) has a table listing allotments/pastures that contain woody draws/riparian areas and the proposed management changes under alternative 3.</p> <p>Chapter 2, tables 2-4 and 2-5, lists the proposed adaptive management to be implemented first and the expected outcome of that implementation including improvement in the condition of riparian areas and vegetation.</p> <p>Monitoring is discussed in chapter 2 and listed in table 2-7.</p>
8.	<p>Chapter contains no mention of the environmental impacts of prairie dog habitat encroachment into the Special Plant and Wildlife Habitat Area for Sage Grouse. -- "Areas managed for sage grouse would have high structure. Areas managed for swift fox and prairie dogs would have low structure."</p> <p>We believe that the management prescriptions in the DEIS for sage grouse habitat and the prairie dog habitat are in direct conflict. Further, we believe that this conflict has not been described or evaluated in the DEIS.</p> <p>Prairie dog habitat expansion into Sage Grouse habitat is causing the destruction of the sage grouse habitat and this habitat destruction of an ESA candidate species must be properly evaluated.</p> <p>the Fall River West and Oglala GA DEIS is devoid of any scientific, environmental information evaluating the direct conflict between the prairie dog habitat expansion into the sage grouse special habitat area.</p>	<p>Existing condition of greater sage-grouse and sage-grouse habitat is discussed in the BABE and in chapter 3 of the FEIS. As noted in both documents, the limiting factor for sage grouse in the project area appears to be the amount of sagebrush that covers the landscape. The BABE notes that "the lack of forbs and the height of herbaceous cover in extreme drought conditions are problematic, but they are far outweighed by the lack sagebrush canopy coverage."</p>
9.	<p>After the DEIS was released for public comment, hundreds of acres of big, tall sagebrush in the Special Sage Grouse Habitat Management Area were eviscerated by an intense wildfire in the Fall River West GA. --we believe that a supplement to the DEIS is also required as a result of the changed circumstances caused by the recent wildfires.</p>	<p>The burned area has been added to, and analyzed in, the BABE and the discussion summarized in chapter 3 of the FEIS.</p>

Comment		Response
10.	FEIS should discuss the effect of man-made dams on the area, both upstream and downstream impacts.	None of the proposed dams are located on perennial or intermittent streams.
11.	page 3-51 the FS discusses a study by Rimbey and Torrell (2011) that shows other grazing-related costs eliminates the cost difference and in three states the cost is more on public land. The FS should discuss any studies that contradict this and/or provide more details on this study in an appendix.	The Rimmel and Torrell (2011) study was listed in bibliography for the DEIS. It is available in the project record and at the following site: <a href="http://www.cals.uidaho.edu/aers/PDF/AEES/2011/GrazingCost2011.pdf">http://www.cals.uidaho.edu/aers/PDF/AEES/2011/GrazingCost2011.pdf</a>
12.	Joe did not understand the statement on page 3-17 about the artificial vernal pool and artificial playa wetland community and wanted further explanation of this statement. He felt that grazing this area in the summer would potentially be more harmful since cattle are grazing uplands in the spring. He feels further discussion is warranted, data, and would not like to change the rotation due to many complications if grazed in the fall.	Effects of the alternatives on rare plant communities are disclosed in chapter 3. The proposed action did not change the rotation for this allotment.
<b>Additions to the document</b>		
13.	The EPA recommends including the entire 2001 Forest Plan as an Appendix, or at minimum including the entirety of 2001 Forest Plan's Chapter 1 (Standards and Guidelines) as an Appendix or Supplement, as it includes more specific information.	The LRMP is included in the project record. LRMP direction applicable to this project is included in appendix A.
14.	In the event that there are jurisdictional waters of the U.S. impacted by the proposed action, we recommend that any mitigation should occur in the same HUC 8 or smaller watershed as the location of the project impacts.	There are no jurisdictional waters in the project area - see definition* below. The effects analysis boundaries for each resource are discussed in the FEIS chapter 3. *Definition of jurisdictional waters: The following waters are protected by the Clean Water Act: Traditional navigable waters, Interstate waters, Wetlands adjacent to either traditional navigable waters or interstate waters, Non-navigable tributaries to traditional navigable waters that are relatively permanent, meaning they contain water at least seasonally, Wetlands that directly abut relatively permanent waters. ( <a href="http://water.epa.gov/lawsregs/guidance/wetlands/upload/wous_guidance_4-2011.pdf">http://water.epa.gov/lawsregs/guidance/wetlands/upload/wous_guidance_4-2011.pdf</a> )

Comment		Response
15.	The DEIS proclaims that Alternative 1 is the "No Action, No Livestock Grazing" alternative for management of the Fall River West and the Oglala G.A.s. Consideration of this alternative is a violation of the previously quoted Federal Regulation.	Requirement for consideration of a no action alternative is discussed in chapter 2 of the FEIS and is shown below. "The Council for Environmental Quality (CEQ) regulations for implementing the National Environmental Policy Act (NEPA) requires that a no action alternative be developed as a benchmark from which the agency can evaluate the proposed action. No action in livestock management planning is synonymous with "no domestic livestock grazing" and means that domestic livestock grazing would not be authorized within the project area (FSH 2209.13; WO amendment 2209.13-2005-10)."
16.	Does the NNF Land and Resource Management Plan (LRMP), the FS Manual, FS Handbook, recent FS Planning Rule or other national FS directives, provide you with instructions for what to do when an MIS is extirpated? If so, please discuss such guidance.	Under the 2012 planning rule, there is no direction for managing extirpated species, and MIS are replaced with focal species. Section § 219.9 of the planning rule "adopts a complementary ecosystem and species-specific approach to maintaining the diversity of plant and animal communities." Forest Service manual and handbook direction and the LRMP do not contain direction for managing extirpated species.
17.	Please display all mesic areas, wetlands, springs, and intermittent and perennial streams on a map.	NWI maps are included in the hydrology specialist report. There are no maps of the other water features mentioned by the commentor.
18.	All stock tanks should have overflow values-- devices to prevent birds,--from drowning.	This design feature is in the <i>Design Features</i> table in chapter 2 of the DEIS and it is also in the FEIS chapter 2 (table 2-6).
19.	All fences should be designed to provide for large/tall wildlife to cross fences as needed,	A design feature has been added to table 2-6 in chapter 2. This LRMP direction was also added to FEIS appendix A - 2001 LRMP Direction (Objectives, Standards, and Guidelines).
20.	All fences should provide for gates or styles at intervals -- to provide access to habitats or areas of interest to recreators. All primitive gates at roads should be designed so women, old people and teenagers can open and close them	Design features have been added to table 2-6 in chapter 2. This LRMP direction was also added to FEIS appendix A - 2001 LRMP Direction (Objectives, Standards, and Guidelines)

Comment		Response
21	Protection of visual quality should be an objective during improvements.	The recreation specialist report and chapter 3 of the FEIS contain an expanded discussion of the recreation opportunity spectrum (ROS) and scenic integrity objectives (SIO) in the project area and how those resources will be affected by the alternatives.
22	FEIS should discuss the loss of saturated soils and any adverse impacts to plant and wildlife diversity from such past modifications to the lands hydrology.	A discussion of hydric soils has been added to the <i>Water Quality</i> specialist report and to chapter 3 of the FEIS.
23.	The FEIS should identify the largest areas without improved roads.	Maps of areas without improved roads were generated as part of the 2010 Travel Management Plan for the Nebraska National Forest, Buffalo Gap National Grassland, Oglala National Grassland, and Samuel R. McKelvie National Forest EIS. They are available at <a href="http://www.fs.usda.gov/detail/nebraska/home/?cid=stelprdb5097502">http://www.fs.usda.gov/detail/nebraska/home/?cid=stelprdb5097502</a> .
24.	Please provide a map of the ROS values and the SIO for all areas.	The recreation specialist report and chapter 3 of the FEIS contain an expanded discussion of the recreation opportunity spectrum (ROS) and scenic integrity objectives (SIO) in the project area.
25.	The FEIS claims there will be no direct effect to SIOs or ROS within the project area for two alternatives if implemented. Please explain the reasoning for this.	The recreation specialist report and chapter 3 of the FEIS contain an expanded discussion of the recreation opportunity spectrum (ROS) and scenic integrity objectives (SIO) in the project area.
26.	Management indicator species--only mentions sharp tailed grouse. The Greater sage grouse is listed under T & E species section, not the MIS section. There are other MIS on the NNF besides these two. Please be clear to list them all, -- discuss monitoring --and impacts	Management indicator species for the project area are greater sage-grouse, black-tailed prairie dog, and plains sharp-tailed grouse. Habitat requirements for all three species are discussed in the <i>Existing Condition</i> section of the BABE.

Comment		Response
26, cont.		Greater sage grouse are discussed in the <i>Threatened and Endangered Species</i> section of the BABE and the FEIS. Black-tailed prairie dogs are discussed in the <i>Sensitive Species</i> section of the BABE and the FEIS (chapter 3). Plains sharp-tailed grouse were discussed in the MIS section of the DEIS and are discussed in that section of the FEIS. The BABE for the FEIS contains an expanded discussion of the plains sharp-tailed grouse.
27.	Sharp Tailed Grouse--Does this LRMP guidance allow for exceptions during drought? How many years since the LRMP Revision have the Forest Plan guidance on the grouse not been met? Will climate change bring more drought years than previously predicted? How are you determining population trends?	The BABE for the FEIS contains an expanded discussion of the plains sharp-tailed grouse.
28.	It should discuss any possible impacts to the sturgeon chub, which exists downstream in the Cheyenne River, below Angostura. Could water quality or water quantity issues arising in this far up stream area affect it?	As noted in the BABE, the sturgeon chub was eliminated from further analysis because it was not found in various surveys of the project area and its habitat (large turbid rivers) does not exist in the project area. The determination for sturgeon chub is "no impact."
29.	Prairie Dogs --Please expand-- Please discuss it's ecological importance. --how--have--been meeting the minimum acreage for your GA during the past years and also predict if you will exceed the minimum in the future. --discuss past monitoring. -- We would like efforts to maximize prairie dogs in an action alternative. Where are the prairie dog acres located?	Black-tailed prairie dogs are discussed in the sensitive species section of the BABE and the FEIS. As disclosed in the DEIS, FEIS, and the BABE, decisions for boundary management and interior management of prairie dog populations were made in 2005 and 2008 (USDA Forest Service 2005, USDA Forest Service 2008). The two decisions prescribe the acres of prairie dogs that will be maintained in each geographic area and where and when control will take place.
30.	provide a map of all allotments under discussion --all the grazing improvements --all roads displayed.	Maps of the allotments were included in appendix C of the DEIS. Allotment maps have been updated for the FEIS and are in appendix C.
31.	FEIS should have the maps relative to sagebrush and sage grouse habitat requested above.	The BABE contains a map of sagebrush canopy cover on the Buffalo Gap National Grassland and a map of sagebrush canopy cover following the 2012 fires.

Comment		Response
32.	a topographic map and a map of water influence zones requested above.	Water influence zones in the project area are not mapped. Mapping the zones was not necessary to evaluate the effects of the alternatives on water quality and soil resources in the project area.
33.	provide maps of prairie dog acres and sharp tail grouse leks. If you have burrowing owls--should map those.	Maps of sharp-tailed grouse leks, active prairie dog towns, and burrowing owl habitat have been included in the project record.
34.	The colonization of the Americas by Caucasians, the dislocation of Native Americans, the Lakota claims of treaty violation and ownership to the area should be disclosed in the environmental justice,	Environmental justice is discussed in the socio- economic report as required by Executive Order 12898. The Council on Environmental Quality (CEQ) guidance is also discussed in the report. This information was presented in the DEIS and in the FEIS.
35.	The 2012 Integrated Report for Surface Water Quality Assessment was submitted to the EPA in April and a final version is available for down load from the SD DENR web site. I think that may be more current than the 2010 303d list and have new information on non-attainment waters.	The water quality specialist report for the FEIS used the <i>2012 Integrated Report for Surface Water Quality Assessment</i> .
36.	I am attaching 3 USFWS documents on recreational use by Americans and SD folks. One is a 2006 nationwide survey, one is a 2006 SD survey and one is a 2001 survey about birding. They clearly show that wildlife watching exceeds hunting as a recreational use by Americans and also South Dakotans.	These documents are included in the project record.
37.	I've attached 3 files pertaining to the Sage-grouse Conservation Objective Team's draft report: pdf of the draft sage-grouse COT report, USFWS Press Release, USFWS fact sheet	These documents are included in the project record.
38.	There is not an enclosure on Brush Creek. Fence line needs removed on map and description in Table 2-5, pg.2-16, Table 2-1, pg. 2-2, Indian Creek and Brush Creek Allotment Maps need existing improvements and proposed improvements updates.	The range specialist report has been updated to correct this.
<b>Modify the proposed action</b>		
39.	In regard to pasture #19A one new tank on Sugarloaf pipeline, with additional temporary tank site (cultural study).	The range specialist report and the FEIS have been changed to reflect this.
40.	In regard to the windmill move overflow tank and add on (cultural study) change pipe and pump 2in pipe 1 7/8 pump wooden rods.	The range specialist report and the FEIS have been changed to reflect this.

Comment		Response
41.	Cultural study for fence relocation between #19 and #45 consideration of abandoned fence line for participant fence.	The range specialist report and the FEIS have been changed to reflect this.
42.	Possible change from cow calf to yearling.	This is currently an option under alternative 3
43.	As for pastures 19 and 19A I concur with suggested changes of Eniel Raben.	The range specialist report and the FEIS have been changed to reflect this.
44.	Joe would like to keep his grazing rotation as it is currently. Due to his 30 + private land pastures grazing plan, weaning, spring calving, facilities, water and many other variables, the current rotation system works well.	The proposed action did not change the rotation for this allotment.
<b>Sage grouse</b>		
45.	the FS must quantify to what extent Fall River West included sage habitat prior to large-scale poisoning exercises in the past.	Additional discussions of greater sage grouse habitat are included in the BABE and chapter 3 of the FEIS.
	What was the historic distribution of sage habitat in this area - both on private and on public land in the SW corner of SD. Was there any habitat ever in the NW corner of Nebraska? If so what happened to it and what role did the Grasslands play in its' loss or protection? Where are the lands capable of supporting sage grouse habitat that are currently sufficiently covered , not sufficiently covered or not covered at all by sagebrush? Can you compare current canopy coverage with historic canopy coverage?	The BABE contains an expanded discussion of sagebrush habitat in the project area (see the <i>Existing Condition</i> section). The following maps were also added: Distribution of sagebrush across the western United States (Connelly et al 2004); 2004 sagebrush canopy cover - Buffalo Gap NG; 2012 sagebrush canopy cover, post fire.
	We request the Service essentially start from scratch by analyzing the relative values of the project area in the context of the federal, state and local conservation statuses of the greater sage grouse. Given the current status of the greater sage grouse and the preponderance of conservation science available to the Service we find no reason that a genuine effort on the part of the Service to restore the proposed project area to suitable sage grouse habitat is to be considered beyond the scope of this proposed project. We believe the Service should find the restoration of the proposed project area to suitable sage grouse habitat to be a reasonable alternative to be considered.	Additional discussions of sage grouse habitat are included in FEIS chapter 3 Sagebrush planting as an adaptive management option was added to alternative 3. Specialists evaluated this adaptive option and documented whether it affects their respective resources. That documentation is in the project record. Results of their assessment are summarized in chapter 3 of the FEIS.

Comment		Response
45, cont.	we (PHAS and NH) want the FS to engage in an effort to recover the greater sage grouse population and its habitat in the Fall River District.	Additional discussions of sage grouse habitat are included in FEIS chapter 3 Sagebrush planting as an adaptive management option was added to alternative 3. Specialists evaluated this adaptive option and documented whether it affects their respective resources. That documentation is in the project record. Results of their assessment are summarized in chapter 3 of the FEIS.
46.	When did the Nebraska National Forest poison (or otherwise destroy) the sage habitat? During what years did that occur?  When did the Nebraska National Forest destroy sage habitat on these NNF grasslands? How was it destroyed? Were there any NEPA documents or other written records to justify or describe those decisions?	A discussion of past treatment of sagebrush has been added to the BABE in the <i>Existing Condition</i> section.
47.	How long has the greater sage grouse been an MIS on the Forest? As it was an MIS what kind of monitoring records for habitat or population are there and for how long? Had the population been in steady decline, or did it just blink out in 2006?	The following information has been added to the <i>Existing Condition</i> section of the BABE: "The sage grouse was selected in the 2001 revision of the LRMP as the management indicator species (MIS) for the sagebrush habitat in the West Geographic Area." Monitoring information has been added to the BABE in the <i>Analysis of Effects for T &amp; E Species</i> section. Additional discussion on the effects of the alternatives has been added to the BABE in the <i>Determination of Effect and Rationale for the Greater Sage Grouse</i> section.
48.	The discussions on page 3-19-20 are confusing because you don't define what "area" has "Only 7% of the area had a 10% or greater canopy coverage of sagebrush".	This has been clarified in the BABE in the <i>Analysis of Effects for T &amp; E Species</i> section.
49.	Are there any changes to sage grouse core habitat in Wyoming related to this decline in SD or any problems with connectivity? If so, please discuss.	Sage grouse habitat in Wyoming and effects to that habitat are outside the analysis boundaries and scope for this project.

Comment		Response
50.	Please discuss the leks and where they have been, both before sagebrush was removed and after. Why when you have an extirpated MIS, which is a federal candidate species, are you allowing for a greater interval than once a year in monitoring of leks/nesting?	Additional information on sage grouse leks has been added to the BABE in the <i>Analysis of Effects for T &amp; E Species</i> section. As noted in the <i>Monitoring</i> section in chapter 2, "the amount of monitoring done annually will depend on funding and availability of resources."
51.	We believe the current core sage grouse habitat is thought to be in Wyoming and that SD is now believed to be on the fringe of that current core habitat. If this is true, the Wyoming grouse are not using habitat on the fringe of their range, but will expand from core area to SD if conditions improve. We want you to fully explore in this EIS, what you can do to bring the sage grouse back across the border.	Additional discussions of sage grouse habitat are included in FEIS chapter 3. Sagebrush planting as an adaptive management option was added to alternative 3. Specialists evaluated this adaptive option and documented whether it affects their respective resources. That documentation is in the project record. Results of their assessment are summarized in chapter 3 of the FEIS.
52.	Why doesn't the FS know what is the cause of the decline of the sage grouse? Please disclose what evidence have you gained, from all your years of monitoring your MIS, that show either that livestock grazing "may be a contributor" to grouse's extirpation or may be beneficial to grouse?	Additional information on sage grouse habitat and population trends in the project area is included in the BABE and summarized in FEIS chapter 3. The BABE also includes a discussion of the effects of livestock grazing on sage grouse.
53.	Please provide a map of all areas with "sufficient canopy coverage". Please provide a map of any areas with "insufficient canopy coverage". Please relate these (on a map) to areas with historic but lost sagebrush,	The BABE contains a map of sagebrush canopy cover on the Buffalo Gap National Grassland and a map of sagebrush canopy cover following the 2012 fires.
54.	We request a sage grouse recovery alternative, where actions are designed to bring breeding birds back across the border from Wyoming. This Greater Sage Grouse Alternative should at a minimum require a number of years with no grazing, to provide for recovery of the understory. In these areas grazing can't be reintroduced, until appropriate objectives met. It should have protections for wet areas. --reduce fragmentation-- reduce disturbance from human activities-- relocating stock tanks, fences, salt licks or other "improvements"-- please disclose these options and choose some appropriate mitigation in the sage grouse alternative.	An alternative emphasizing sage grouse recovery was not analyzed because it does not meet the purpose and need for the project. Additional discussions of sage grouse habitat are included in FEIS chapter 3. Sagebrush planting as an adaptive management option was added to alternative 3. Specialists evaluated this adaptive option and documented whether it affects their respective resources. That documentation is in the project record. Results of their assessment are summarized in chapter 3 of the FEIS.

Comment		Response
55.	The FS should investigate the re-planting of areas with sagebrush plants,	Sagebrush planting as an adaptive management option was added to alternative 3. Specialists evaluated this adaptive option and documented whether it affects their respective resources. That documentation is in the project record. Results of their assessment are summarized in chapter 3 of the FEIS.
<b>Violation of NEPA</b>		
56.	In Nebraska about two thirds of the cultural resources sites identified in past surveys, have not be evaluated for NRHP. In SD about half have not been evaluated. This means the cultural impacts section is incomplete and impacts can't be disclosed in the FEIS and we believe this is a violation of NEPA	As noted in the cultural resources specialist report and in chapter 3 of the FEIS, protection of cultural resources in the project area has been discussed with the state historic preservation offices in Nebraska and South Dakota. "Once the ground-disturbing activities and their specific locations are identified, they will be subject to the regular Section 106 process, as identified in 36 CFR 800 (SD SHPO concurrence May 6, 2013; NE SHPO concurrence May 29, 2013)."
<b>Outside the scope of the project</b>		
57.	When the Service allowed and, in fact, encouraged the extirpation of greater sage grouse it clearly violated the letter and spirit of the MUSYA and failed to fulfill its responsibility to protect wildlife viability and a species that is a candidate for protection under the Endangered Species Act ... The forest has to comply with the substantive and detailed guidelines in the NFMA regulations and should set forth in the forest plan how the multiple uses are going to be provided in a way that also meets the requirements in the NFMA regulations.	This is a comment on the 2001 LRMP not on the DEIS for this project. It is outside the scope.
58.	the assignment of relative values which could lead to the exclusion of a certain multiple use on a localized piece of national is something that has to be done in the forest plan, and its impact has to be analyzed in accordance with NEPA, and subjected to public comment. In the context of an inadequate plan, the Nebraska National Forest cannot claim to be in compliance with MUSYA.	This is a comment on the 2001 LRMP not on the DEIS for this project. It is outside the scope.

Comment		Response
59.	The fact is that the assignment of relative values which could lead to the exclusion of a certain multiple use on a localized piece of national forest or grassland is something that has to be done in the Forest Plan, and its impact has to be analyzed in accordance with NEPA, and subjected to public comment. Without having an adequate Forest Plan and EIS, can the Nebraska National Forest claim to be in compliance with MUSYA? We request the Forest consider MUSYA and respond, in clear detail, to this question.	This is a comment on the 2001 LRMP not on the DEIS for this project. It is outside the scope.
60.	a reintroduction plan should be evaluated and the potential for such reintroduction disclosed and made a long term option for the NNF via the FEIS.	Species reintroduction is outside the scope of this livestock grazing project and decision.
61.	We request that the FS engage in an effort to recover the greater sage grouse population and its habitat in the Fall River District.	Recovery efforts for species are outside the scope of this livestock grazing project and decision.
<b>Non substantive</b>		
<b>Thank you for your comment</b>		
62.	the Service must consider diversity in terms of multiple use management, which means that they have to consider the relative values forest-wide of all the potential areas to provide for diversity. As 27(g) states, reduction in diversity of plant and animal communities and trees species from that which would be expected in a natural forest, or from the similar to the existing diversity in the planning area, may be prescribed only where needed to meet multiple use objectives. Any serious analysis of "relative values" could not fail to recognize the high relative value of sage grouse habitat. Yet, it appears the Service in this case failed to recognize it importance.	Thank you for your comment.
63.	In the NNF and central to this public comment process are the question of multiple use and how is the Forest going to rationalize that it is more important to provide livestock grazing (whether called range management, vegetation treatment, fuel reduction or whatever) than to protect the proposed area's use as a key source of biodiversity and as a safe haven for the imperiled greater sage grouse?	Thank you for your comment.

Comment		Response
64.	I much prefer alternative #2	Thank you for your comment.
65.	I do disagree with the premise impact of grazing on wildlife.	Thank you for your comment.
66.	Alternative #2 seems to be the most reasonable one.	Thank you for your comment.
67.	As for the curlews and impact of grazing they seem to be nesting on private land	Thank you for your comment.
68.	If changes occur in the project purpose, need, alternatives, or impacts between now and the time of issuance of Public Notice, the EPA's 404 program reserves the ability to comment further on this project. Information may be generated through the 404 public interest review process that was not documented during the EIS process and should be considered in the final decision. This could include changes in regulation or processes, advances in the knowledge of the resources to be impacted, discovery of populations of threatened or endangered species, new best management practices, and/or improvement in stream or wetland restoration science.	Thank you for your comment.
69.	I oppose logging and burning. I oppose new roads. I oppose herbicide use.	Thank you for your comment.
70.	The DEIS Table 1-2 and 1-4 states that 10 to 30 percent of the land in the Fall River West and Oglala Geographic Areas are desired to contain low structure. We believe this standard is inconsistent with the direction provided in the Federal Regulation[36 crf 213.1 sec D] cited above.	Thank you for your comment.
71.	The FRONG DEIS says on pages 3-19 "There have been no sage grouse observed in the GA since 2006." Stating on page 19 that an MIS has recently disappeared from Planning unit, the Service concludes on page 20 that Alternative 2 and 3 "May adversely impact individuals but is not likely to result in a loss of viability in the planning area or cause a trend toward federal listing". (emphasis added) A species that has already been extirpated due largely to past and ongoing management decisions obviously cannot lose viability via future actions.	Thank you for your comment.

<b>Comment</b>		<b>Response</b>
72.	In areas of sage grouse habitat, grazing may need to be completely eliminated for at least 6 years for recovery of the understory vegetative component.	Thank you for your comment.

## APPENDIX F

# DROUGHT MANAGEMENT GUIDELINES

Drought management guidelines will be implemented according to recommendations found in *Drought Management on Range and Pastureland, A Handbook for Nebraska and South Dakota* (Reece et al. 1991). Precipitation from the preceding two years, October through September, has a direct influence on forage production and range recovery in the upcoming year. The greatest emphasis is placed on precipitation in the immediate prior year because it has the greatest influence on vegetation in the upcoming year. Precipitation in the immediate prior year is weighted at 75 percent, while precipitation from two years prior is weighted at 25 percent.

This method provides for range recovery, and if needed, an opportunity to reduce livestock numbers before winter costs are incurred. This prediction assumes that precipitation in the upcoming winter and spring will be near average. If precipitation levels differ dramatically from average, stocking levels will need to be adjusted further prior and during the current grazing season.

**During periods of drought, set the stocking rate based on the following formula:**

**$\{[(a \times .25) + (b \times .75)] / c\} \times d = \text{recommended stocking level}$**

a = precipitation 2 years prior from October thru September

b = precipitation 1 year prior from October through September

c = long term precipitation for the geographic area

d = permitted stocking level

### **Example: Stocking level for 1999 grazing year**

a = 18 inches, October 1996 through September 1997

b = 12 inches, October 1997 through September 1998

c = 16 inches

d = 2,700 AUMs

$\{[(18 \times .25) + (12 \times .75)] / 16\} \times 2700 = \{[4.5 + 9] / 16\} \times 2700 = [13.5 / 16] \times 2700 =$

$0.84 \times 2700 = 2,278 \text{ AUMs recommended stocking level}$

If the weighted average precipitation for the previous two years exceeds 100 percent of long-term average, the recommended stocking level cannot exceed the permitted stocking level to allow for recovery of the rangeland vegetation or other resource needs.